

1 GEORGE V.

SESSIONAL PAPER No. 14

A. 1911

REPORTS, RETURNS AND STATISTICS  
OF THE  
INLAND REVENUES  
OF THE  
DOMINION OF CANADA

FOR THE YEAR ENDED MARCH 31

1910

PART III  
ADULTERATION OF FOOD

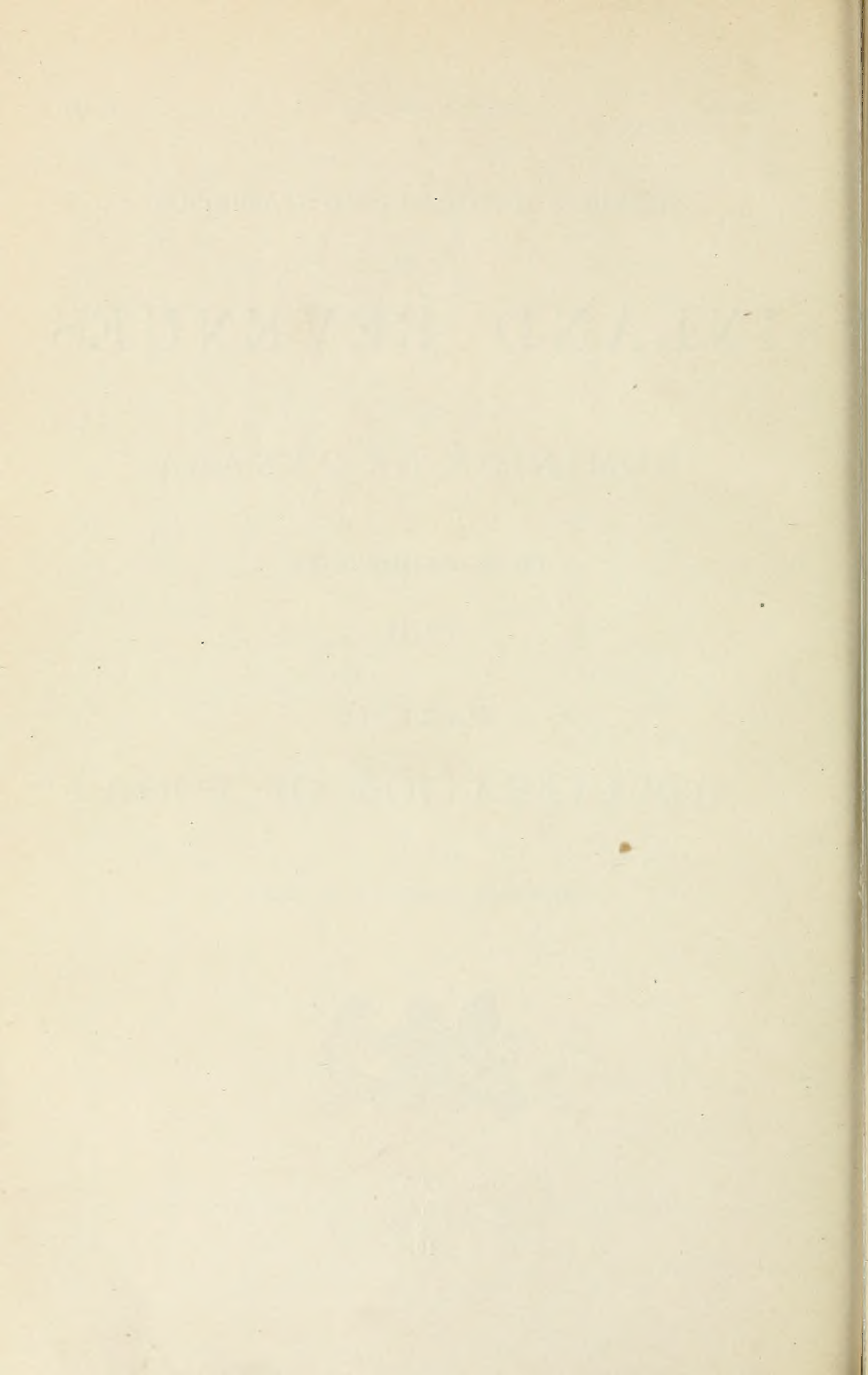
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1910

No. 14—1911]



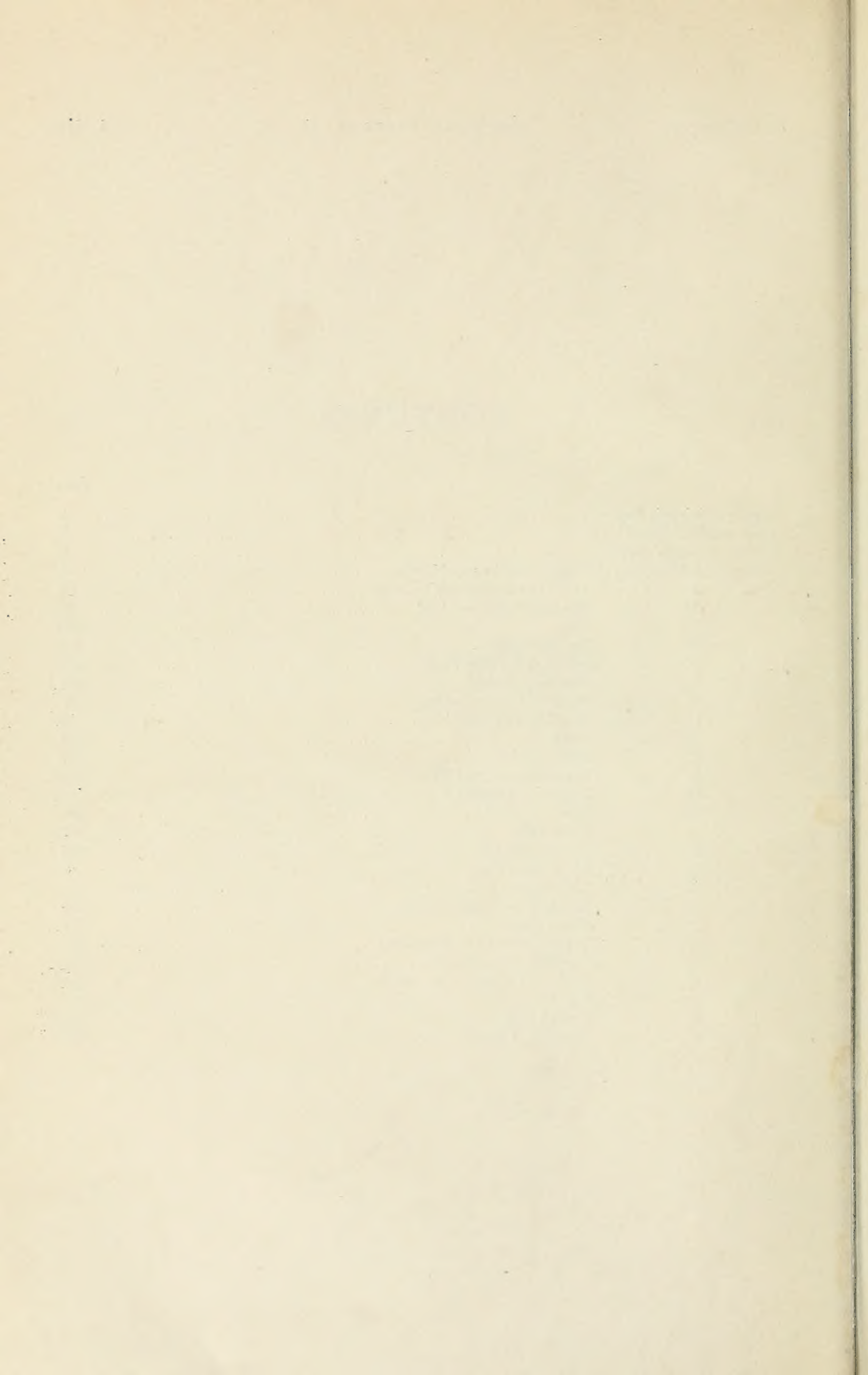




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REPORT  
OF THE  
DEPUTY MINISTER OF INLAND REVENUE.  
INSPECTION OF FOODS, DRUGS AND FERTILIZERS.

To the Hon. WM. TEMPLEMAN,  
Minister of Inland Revenue.

SIR,—I have the honour to submit herewith the reports of the official analysts of the Dominion for the year ending March 31, 1910.

Seventy (70) samples were analysed outside the central laboratories of Ottawa, viz.:—

Description.	Genuine.	Doubtful.	Not Identified.	Total.
Fertilizers.....	43	2	25	70

The following statement shows the work done by the Chief Analyst and staff at Ottawa, for the year ending March 31, 1910.

Description.	Genuine.	Doubtful.	Adulterated.	Sold as Compound.	Total.
Commercial Cream Tartar.....	180	4	41	.....	225
Sulphate of Magnesia.....	150	.....	.....	.....	150
Sulphate of Soda.....	150	.....	.....	.....	150
Phosphate of Soda.....	148	.....	.....	.....	148
Tea.....	172	50	.....	.....	222
Ground Ginger.....	98	21	31	.....	150
Infants and Invalids Foods.....	.....	.....	.....	.....	77
Fertilizers as Sold.....	.....	.....	.....	.....	66
Distilled Liquors.....	.....	.....	.....	.....	100
Liquor Picis Carbonis.....	13	.....	6	5	24
				(Proprietary Medicine).	
Cream.....	.....	.....	.....	.....	65
Ice Cream.....	.....	.....	.....	.....	140
Bran, Shorts, Chop-feed.....	.....	.....	.....	.....	545
Copper in Vegetables.....	.....	.....	.....	.....	70
Lard.....	64	.....	4	1 (broken in transit) 1 sold as compound.	70
Fruit Jams.....	108	7	1	30 sold as compound.	146
Cream of Tartar.....	180	.....	29	2 lost.	211
Ale and Lager Beer.....	.....	.....	.....	.....	140
Lime Fruit Juice.....	42	13	12	9	76
				(sold as cordials)	
Lemon Flavouring Extract.....	.....	.....	.....	.....	75
Friar's Balsam.....	69	.....	1	.....	70
Highly Coloured Confectionery.....	149	.....	.....	.....	149
Flavouring Extract of Vanilla.....	.....	.....	.....	.....	77
Borax.....	135	16	.....	.....	151
Pepper.....	204	26	49	1 (lost)	280
Canned Soup.....	.....	.....	.....	.....	150
Arsenate of Lead.....	.....	.....	.....	.....	26
Total.....	1862	137	174	49	3,753



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In addition to the above, 828 samples of miscellaneous character (detailed in the Report of the Chief Analyst) have been analysed, making the total number 4,581 samples, as against 4,373 for the preceding year 1908-1909.

The defining of standards for food stuffs has progressed satisfactorily and the Advisory Board has prepared standards for the following, viz.:—‘Milk and its Products’, ‘Grain Products’, ‘Meat and Meat Products’ and ‘Beverages’.

The standards for ‘Milk and its products’ have, as required by section 26 of ‘The Adulteration Act’, been submitted for legal authorization. The others will, as speedily as possible, be likewise recommended for legalization.

The provisions of ‘The Commercial Feeding Stuffs Act’ and ‘The Fertilizers Act’, relative to registration of brands, have been, I believe, well observed.

I have the honour to be, sir,

Your obedient servant,

W. J. GERALD,  
*Deputy Minister.*

INLAND REVENUE DEPARTMENT,  
OTTAWA, June 16, 1910.



REPORT OF THE CHIEF ANALYST.

OTTAWA, May 9, 1910.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to report as follows upon the work of this laboratory, for the fiscal year ending March 31, 1910.

During this period, 3,753 samples were collected by our inspectors. The results of analysis of these are detailed in Bulletins 180 to 205, both inclusive, as follows :—

Number of Bulletin.	Subject.	Number of Samples
180	Commercial Cream of Tartar...	225
181	Arsenic as an impurity in drugs .....	448
183	Tea .....	222
184	Gronnd Ginger.....	150
185	Infants and Invalids Foods.....	77
186	Commercial Fertilizers as sold .....	66
187	Distilled Liquors .....	100
188	Liquor Picis Carbonis.....	24
189	Cream.....	65
190	Ice-Cream.....	140
191	Bran, Chop-feed, Shorts.....	545
192	Copper in Vegetables.....	70
193	Lard .....	70
194	Fruit Jam.....	146
195	Cream of Tartar.....	211
196	Ale and Lager Beer.....	140
197	Lime Juice.....	76
198	Lemon Flavouring Extract.....	75
199	Friar's Balsam .....	70
200	Highly Coloured Confectionery .....	149
201	Flavouring Extract of Vanilla .....	77
202	Borax.....	151
203	Peppers .....	280
204	Canned Soups.....	150
205	Arsenate of Lead .....	26
Total .....		3,753

In addition to the above there have been performed the following occasional analyses, during the year :—

Bull. 182—Standard Fertilizers.....	182
Acetic Acid.....	28
Alcohol .....	10
Beer .....	74
Butter.....	16
Coal.....	1
Cake Icing .....	1



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Cream of Tartar.....	1
Cider... ..	26
Coffee.....	1
Camphor Spirit .....	1
Condensed Milk .....	4
Chocolates .....	1
Cattle Feed .....	8
Cheese.....	2
Cr�am .....	12
Disinfectant .....	1
Fusel Oil .....	4
Fertilizers .....	23
Fruit Wine .....	1
Flavouring Extract.....	3
Flour.....	2
Flour Bleaching Solution (Acid) .....	1
Honey.....	1
Hemlock Extract.....	1
Ice Cream.. ..	3
Ink .....	1
Jam.....	3
Lard .....	4
L�gerine.. ..	1
Lime Juice.....	1
Liquor Picis Carbonis.....	1
Medicines (Patent).....	13
Maple Sugar .....	3
"    Syrup.....	8
Mustard .....	1
Malt . . . . .	1
Malted Milk .....	2
Methylated Spirit.....	1
Milk Flour.....	1
Nutmeg.....	1
Oil .....	1
Oats Rolled .....	2
Orange Pulp... ..	1
Pepper .....	3
Paste.....	1
Spices .....	7
Stockfeed .....	1
Sugar .....	1
Strawberry Flavour Essence .....	2
Schlitz Fitz.....	1
Turpentine .....	4
Vinegar .....	333
Water .....	8
Whisky .....	3
Wine.....	9
Wood Alcohol.....	1
	<hr/>
	828

The total number of analyses made is therefore 4,581. The following solutions have been prepared and supplied for the use of Excise Officers, in vinegar testing :—



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Normal Soda Solution.....	75	Winchesters
Standard Phenolphthalein,.....	15	bottles.
Standard Sulphuric Acid. ....	5	"

About 40,000 copies of our Bulletins have been mailed from this office during the year, and I am pleased to observe that the public press has interested itself in reporting our work as contained in these publications. It is only by such action on the part of the newspapers that consumers throughout Canada can be made aware of our efforts to make the Adulteration Act truly effective. This Act exists for the protection of the consumer, and I hope that a time will soon come when newspaper readers will expect to find notice of our work in their daily and weekly papers, as a matter of course, and a subject of universal interest.

Mr. Lemoine, of this staff, has given much time to the work of carrying out the Proprietary and Patent Medicine Act.

The Fertilizers Act, of 1909, and the Commercial Feeding Stuffs Act, of 1909, came into force on the first of January of 1910, and the first inspections under the Acts will be made during April and May of this year.

The matter of defining standards for food stuffs, and fixing limits of variation, as required by section 26 of the Adulteration Act, has been frequently referred to in the reports of the Chief Analyst for past years. I am happy to state that during 1909-10, very substantial progress has been made in this regard. The Advisory Board, consisting of Dr. Ellis, of Toronto, Dr. Donald, of Montreal, and the Chief Analyst, has had very extended correspondence with manufacturers, importers and others interested, and has prepared standards for Milk and Milk products, Meat and Meat products, Grain and Grain products, and Beverages (Non-alcoholic and alcoholic). These have been submitted for criticism and suggestion, through the Canadian Manufacturers' Association, to as wide a circle of those interested, as possible, and it is hoped that they will be made legally effective during the current year.

It is unnecessary that I should describe here, in detail, the results of analytical work done, as this matter is fully covered by the introductory chapter of each of the 25 bulletins (180 to 205) submitted along with this report, as an integral part of it.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



1 GEORGE V., A. 1911

OTTAWA, May 7, 1910.

The Deputy Minister of Inland Revenue Department,  
Ottawa.

SIR,—I have the honour of submitting to you my report on the analytical work done in my laboratory for your department during the fiscal year ending March 31, 1910.

Only 17 samples of fertilizers were submitted to analysis during that fiscal period. As fertilizers are sold on guaranteed analysis and as the guaranteed composition was not made known to me I am not in a position to state whether all were unadulterated according to the Act.

Yours truly,

F. X. VALADE, M. D.,  
*Public Analyst for District of Kingston.*

VICTORIA, B.C., May 13, 1910.

To the Deputy Minister of Inland Revenue,  
Ottawa.

SIR,—I have the honour to submit a tabulated statement showing the general results of the examination of samples submitted to me by the department during the fiscal year ending March 31, 1910.

Samples.	Date.	Genuine.	Adulterated.	Total.
Fertilizers . . . . .	June 2nd. . . . .	10	0	10

I have the honour to be, sir,  
Your obedient servant,

C. J. FAGAN,  
*Public Analyst.*

66 BEDFORD ROW,  
HALIFAX, N.B., April 25, 1910,

The Deputy Minister of Inland Revenue,  
Ottawa.

SIR,—I have the honour to submit my annual report on the samples of Food, &c., analysed by me during the year ending March 31, 1910.

	Genuine.	Adulterated.	Total.
Fertilizers . . . . .	23	0	23

I have the honour to be, sir,  
Your obedient servant,

MAYNARD BOWMAN,



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112 ST. FRANCOIS XAVIER STREET,  
MONTREAL, April 22, 1910.

A. MCGILL, Esq., F.R.S.C.,  
317 Queen St.,  
Ottawa.

SIR,—I have the honour to report that during the fiscal year ending March 31, I have analysed twenty samples of commercial Fertilizers. Of these, ten were found to be genuine. Two were slightly under guarantee in phosphoric acid and for two others no guarantee was received; whilst six samples could not be accurately identified.

Yours respectfully,

J. T. DONALD.



APPENDIX A.

BULLETIN No. 180—COMMERCIAL CREAM OF TARTAR.

OTTAWA, June 2, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to report on 225 samples of Commercial Cream of Tartar collected throughout the Dominion of Canada, in January of this year, in accordance with your instructions.

The subjoined synoptical table gives the results of analysis :

District.	Genuine.	Doubtful.	Adulterated	Total.
Nova Scotia.....	14		1	15
P. E. Island.....	14		1	15
New Brunswick.....	15			15
Quebec.....	5		10	15
St. Hyacinthe.....	9		6	15
Montreal.....	6	2	7	15
Ottawa.....	12	1	2	15
Kingston.....	15			15
Toronto.....	3	1	11	15
London.....	14		1	15
Windsor.....	15			15
Manitoba.....	15			15
Calgary.....	15			15
Vancouver.....	14		1	15
Victoria.....	14		1	15
	180	4	41	225

Genuine.....	80·00 per cent.
Adulterated.....	18·22    "
Doubtful.....	1·78    "

These results show an improvement on those obtained in 1905, when 72·2 per cent were found genuine. A fact worthy of notice is that districts of New Brunswick, Kingston, Windsor, Manitoba and Calgary show no adulteration of this product ; Nova Scotia, P. E. Island, London, Vancouver and Victoria have only one case each.

In his report of September, 1905, (Bulletin No. 109) the Chief Analyst expressed himself as follows :—

‘ Ordinary commercial Cream of Tartar is ground argols, which have been more or less purified. Argols invariably contain both tartrate and sulphate of lime, and these lime salts appear in the commercial Cream of Tartar. They result in part from being natural to the wine, but chiefly from the so called “plastering” of the wine. The manufacturer of Cream of Tartar is not responsible for their presence, but, inasmuch as they



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reduce the value of the article for purposes of bread-making, their presence is a distinct disadvantage to the purchaser. It follows that genuine samples of Cream of Tartar may differ greatly in value. Samples containing 97 per cent of bi-tartrate of potash are worth, pound for pound, 12 per cent more than samples containing only 85 per cent. Purified Cream of Tartar is made from argols which have been subjected to processes of solution and recrystallization, by which most of the lime salts are got rid of. Such an article should, of course, command a higher price than the ordinary Cream of Tartar.'

So far the percentage of lime salts (tartrate and sulphate) that could be permitted in commercial Cream of Tartar has not been established, but the Chief Analyst has issued a list of proposed Food Standards, and this subject will, undoubtedly, receive full consideration in due time.

I would respectfully recommend that this report be published as Bulletin No. 180.

I have the honour to be, sir,  
Your obedient servant,

ALP. LEMOINE,  
*Acting Chief Analyst.*



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

1909. DISTRICT OF NOVA SCOTIA—

Jan.	12	Cream of Tartar	33801	Dillon Bros., Halifax, N.S.	$\frac{1}{2}$ lb..	20	Nat. Drug and Chem. Co., Halifax, N.S.	
"	12	"	33802	E. Donahoe & Sons, Halifax, N.S.	$\frac{1}{2}$ " ..	15	Schwartz & Sons, Halifax, N.S.	
"	12	"	33803	J. D. Stewart, Halifax, N.S.	$\frac{1}{2}$ " ..	14	Bauld Bros., Halifax, N.S.	
"	12	"	33804	R. B. Adams & Co., Halifax, N.S.	$\frac{1}{2}$ " ..	18	John P. Mott & Co., Halifax, N.S.	
"	14	"	33805	W. J. Hopgood & Son, Halifax, N.S.	$\frac{1}{2}$ " ..	20	Schwartz & Sons, Halifax, N.S.	
"	14	"	33806	T. J. Brown, Halifax, N.S.	$\frac{1}{2}$ " ..	20	Wentzells Ltd., Halifax, N.S.	
"	14	"	33807	W. J. Forristall & Co., Halifax, N.S.	$\frac{1}{2}$ " ..	20	Unknown	
"	14	"	33808	W. E. Crowe & Co., Halifax, N.S.	$\frac{1}{2}$ " ..	20	Todhunter, Mitchell & Co, Toronto.	
"	14	"	33809	Shore & Campbell, Halifax, N.S.	$\frac{1}{4}$ " ..	10	Schwartz & Sons, Halifax, N.S.	
"	15	"	33810	R. N. McDonald, Halifax, N.S.	$\frac{1}{2}$ " ..	18	Robt. Greig Mfg. Co., Toronto.	
"	15	"	33811	Creig & Hodgson, Halifax, N.S.	$\frac{1}{2}$ " ..	15	Can. Drug Co., St. John, N.B.	
"	15	"	33812	Wentworth Stores, Windsor, N.S.	$\frac{1}{2}$ " ..	18	Unknown	
"	15	"	33813	John Dodge & Sons, Windsor, N.S.	$\frac{1}{2}$ " ..	15	Schwartz & Sons, Halifax, N.S.	
"	15	"	33814	M. N. Davison, Windsor, N.S.	$\frac{1}{2}$ " ..	15	Unknown	
"	15	"	33815	G. A. Orman, Dartmouth, N.S.	$\frac{1}{2}$ " ..	18	Bauld Bros., Halifax, N.S.	

DISTRICT OF PRINCE EDWARD ISLAND—

Jan	7	Cream of Tartar	31418	Coffin & Co., Charlottetown.	$\frac{1}{2}$ lb..	20	E. W. Gillett & Co., Ltd., Toronto.	Gillett's ground cream of tartar. Guaranteed to be absolutely pure.
"	7	"	31419	R. K. Brace, Charlottetown.	$\frac{1}{4}$ " ..	14	Greig & Co., Toronto	
"	7	"	31420	Geo. Rackham, Charlottetown.	$\frac{1}{4}$ " ..	18	J. P. Mott & Co., Halifax.	
"	7	"	31421	W. S. Brown, Charlottetown.	$\frac{1}{4}$ " ..	18	W. H. Schwartz & Sons, Halifax.	
"	7	"	31422	H. A. Dunbar, Charlottetown.	$\frac{3}{4}$ " ..	30	Mayell & Co., Toronto.	'Art Brand.' Pure, guaranteed cream of tartar.
"	8	"	31423	W. H. Cudmore, Charlottetown.	$\frac{1}{2}$ " ..	20	R. E. Mutch, Charlottetown.	
"	8	"	31424	J. W. Ferguson, Charlottetown.	$\frac{1}{2}$ " ..	20	J. A. Farquharson, Charlottetown.	



## CREAM OF TARTAR.

Preliminary Examination.				Determinations.					Calcium Tartrate.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.			
R. J. WAUGH, INSPECTOR.											
None.	None	None.	496	.....	.....	.....	.....	.....	7.00	33801	Genuine, 93 per cent.
"	"	"	500	.....	.....	.....	.....	.....	.....	33802	" 94 "
"	"	"	480	.....	.....	.....	.....	.....	.....	33803	" 90 "
"	"	"	478	.....	.....	.....	.....	.....	.....	33804	" 89 "
"	"	"	498	.....	.....	.....	.....	.....	.....	33805	" 94 "
"	"	"	480	.....	.....	.....	.....	.....	.....	33806	" 90 "
"	"	"	457	.....	.....	.....	.....	.....	12.06	33807	" 86 "
"	"	"	516	.....	.....	.....	.....	.....	.....	33808	" 97 "
"	"	"	482	.....	.....	.....	.....	.....	.....	33809	" 90 "
"	"	"	502	.....	.....	.....	.....	.....	.....	33810	" 94 "
"	"	"	476	.....	.....	.....	.....	.....	.....	33811	" 89 "
"	"	"	476	.....	.....	.....	.....	.....	.....	33812	" 89 "
"	"	"	476	.....	.....	.....	.....	.....	.....	33813	" 89 "
Pre- sent.	Pre- sent.	"	449	4.85	Maize	1.20	.....	10.84	.....	33814	Adulterated with alum and starch.
None.	None.	"	496	.....	.....	.....	.....	.....	.....	33815	Genuine, 93 per cent.

[illegible]



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		
DISTRICT OF PRINCE							
Jan.	8 Cream of Tartar.	31425	James Laferty, Charlottetown.	1 lb.	20	John Connolly Co., Charlottetown.	
"	11 "	31426	McGougan & Wright, Summerside.	"	15	Laporte, Martin & Co., Montreal, Que.	
"	11 "	31427	Sinclair & Stewart Summerside.	"	15	Dearborne & Co., St. John, N.B.	
"	11 "	31428	F. W. Strong, Summerside.	"	20	W. H. Schwartz & Sons, Halifax, N.S.	
"	11 "	31429	J. A. Hynes, Kensington.	"	18	Geo. E. Barbour Co., Ltd., St. John, N.B.	Guaranteed strictly pure.
"	12 "	31430	Jas. Kennedy, Kensington.	"	16	Carvell Bros., Charlottetown.	
"	12 "	31431	P. A. McKenzie, Hunter River.	"	18	Auld Bros., Charlottetown.	
"	12 "	31432	G. H. McGuigan, Hunter River.	"	20	Rathenbury & Co., Charlottetown.	

DISTRICT OF NEW BRUNSWICK—

Jan.	5 Cream of Tartar.	29852	Walter Gilbert, St. John, N.B.	1 lb.	20	Gilbert Kent & Son, St. John, N.B.	
"	5 "	29853	Chas. A. Clark, St. John, N.B.	"	20	H. W. Cole, Ltd., St. John, N.B.	
"	7 "	29854	P. Nase & Son, St. John, N.B.	"	15	W. F. Hatheway & Co., St. John, N.B.	
"	7 "	29855	D. J. Purdy, St. John, N.B.	"	15	L. H. Thorne, St. John, N.B.	Crystals imported and ground by vendor.
"	8 "	29856	W. R. Small, St. John, N.B.	"	20	C. H. Cochrane & Co., Ottawa.	
"	16 "	29857	John McKnight, Fredericton, N.B.	"	15	Geo. E. Barbour Co., Ltd., St. John, N.B.	Not guaranteed by vendor, but bought by him for pure cream of tartar.
"	18 "	29858	John Graham Estate, Woodstock, N.B.	"	15	"	
"	19 "	29859	James W. McPhail, Perth, N.B.	"	20	W. C. Purves, St. Stephen, N.B.	
"	20 "	29860	Geo. H. Dewitt, Andover, N.B.	2 pkg.	20	Geo. E. Barbour Co., Ltd., St. John, N.B.	'Acorn' brand, strictly pure cream of tartar
"	25 "	29861	The Sussex Mercantile Co., Ltd., Sussex, N.B.	1 lb.	15	"	
"	26 "	29862	Geo. O. Stratton, Moncton, N.B.	"	15	D. A. Morrison, Amherst, N.S.	
"	26 "	29863	Geo. A. Robertson, Moncton, N.B.	"	15	Jno. P. Mott & Co., Halifax, N.S.	
"	27 "	29864	Thos. Russell, New castle, N.B.	"	15	Baird & Peters, St. John, N.B.	
"	28 "	29865	Simon Holdengraber, Bathurst, N.B.	"	15	F. P. Reid & Co., Moncton, N.B.	
"	28 "	29866	W. J. Kent & Co., Ltd., Bathurst.	"	15	H. W. Cole Co., Ltd., St. John, N.B.	



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## CREAM OF TARTAR.

## RESULTS OF ANALYSIS.

Preliminary Examination.				Determinations.					Calcium Tartrate.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
Starch.	Sulphates.	Phosphates	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.			
EDWARD ISLAND— <i>Concluded.</i>											
None.	None.	None.	490	...	...	...	...	...	...	31425	Genuine. 93 per cent.
Pre-sent.	Pre-sent.	Pre-sent.	493	1 35	Maize	0 40	3 60	2 59	...	31426	Alum phosphate substitute, adulterated.
None.	None.	None.	492	..	...	...	...	...	...	31427	Genuine. 93 per cent.
"	"	"	502	..	...	...	...	...	...	31428	" 94 "
"	"	"	486	..	...	...	...	...	...	31429	" 91 "
"	"	"	500	..	...	...	...	...	...	31430	" 94 "
"	"	"	472	..	....	.....	...	...	...	31431	" 89 "
"	"	"	472	..	...	...	...	.....	.....	31432	" 89 "

J. C. FERGUSON, INSPECTOR.

"	"	"	472	..	...	...	...	...	29852	"	89	"
"	"	"	486	...	...	...	...	...	29853	"	91	"
"	"	"	484	...	...	...	...	...	29854	"	91	"
"	"	"	480	....	...	...	...	...	29855	"	90	"
"	"	"	506	..	...	...	...	...	29856	"	95	"
"	"	"	486	...	...	...	...	...	29857	"	91	"
"	"	"	482	...	...	...	...	...	29858	"	90	"
"	"	"	474	...	...	...	...	...	29859	"	89	"
"	"	"	472	...	...	...	...	...	29860	"	89	"
"	"	"	470	...	...	...	...	12 00	29861	"	88	"
"	"	"	496	...	...	...	...	...	29862	"	93	"
"	"	"	480	...	...	...	...	...	29863	"	90	"
"	"	"	474	...	...	...	...	...	29864	"	89	"
"	"	"	480	...	...	...	...	...	29865	"	90	"
"	"	"	480	...	...	...	...	...	29866	"	90	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		
1909							
DISTRICT OF QUEBEC							
Jan.	4 Cream of Tartar	36823	Arthur Rinfret, 414 St. Joseph St., Que.	½ lb..	20	Unknown .....	
	14 "	36824	Arthur Drolet, 714 Valier St., Quebec.	½ " ..	18	Nat. Drug. Co., Montreal.	
	15 "	36825	Hamel & Bedard, 728 St. Valier St., Que.	½ " ..	20	Turcotte & Frères, Quebec.	
	15 "	36826	G. G. Hamel, 914 St. Valier St., Quebec.	½ " ..	20	Unknown .....	
	15 "	36827	A. Pichette, 322 Arago St., Quebec.	½ " ..	15	Unkown ..	
	15 "	36828	F. X. Lachance, 189 Bayard St., Quebec.	½ " ..	18	Turcotte & Frères, Quebec.	
	15 "	36829	G. Galarneau, 146 Bayard St., Quebec.	½ " ..	20	H. Blouin, Quebec.	
	15 "	36830	S. Turcotte, 143 Bayard St., Quebec.	½ " ..	20	N. Turcotte & Co., Quebec.	
	18 "	36831	T. Pepin, 132 Massue St., Quebec.	½ " ..	20	Turcotte & Frères, Quebec.	
	18 "	36832	Elzear Poitras, 185 Massue St., Quebec.	½ " ..	20	Unknown .....	
	18 "	36833	Mad. Joseph Primeau, 107 Rue St. Luc., Q.	½ " ..	20	Unknown .....	
	18 "	36834	Mad. V. M. Denis, 92 Bayard St., Quebec.	½ " ..	20	Unknown .....	
	18 "	36835	O. Bacon, 28 Hermine St., Quebec.	½ " ..	20	Langlois & Paradis, Quebec.	
	18 "	36836	Mad. T. Laberge, 84 Victoria St., Quebec.	½ " ..	20	Unknown .....	
	18 "	36837	F. X. Page, 114 Victoria St., Quebec.	½ " ..	20	Unknown .....	

DISTRICT OF ST. HYACINTHE—							
Jan.	11 Cream of Tartar	907	Geo. Beaulac, Sorel.	½ lb..	18	C. Labelle & Co., Sorel.	
"	11	908	H. De Labarre, Lock St. Ours.	½ " ..	20	Lacaille, Gendreau & Co., Montreal.	From a 5 lb. box marked Pure Ground Cream of Tartar.
"	12	909	P. Lariviere, St.Ours.	¼ " ..	10	Lacaille, Gendreau & Co., Montreal.	"
"	13	910	F. A. Bourgault, Drummondville.	¼ " ..	10	Hudon & Orsali, Montreal.	"
"	13	911	Guertin & Archambault, Actonvale.	¼ " ..	10	R. Lafortune, Actonvale.	
"	14	912	H. H. Guay, Victoriaville.	¼ " ..	10	Herron, Leblanc & Co., Montreal.	
"	14	913	P. J. Girard, Richmond.	8 oz. Can	20	Pure Gold Mfg. Co. Toronto.	Can labelled pure French cream of tartar.
"	14	914	Denault Grain & Prov. Co., Sherbrooke.	¼ lb. free		W. & P. Currie, Montreal.	Sample from a barrel marked cream of tartar.



## CREAM OF TARTAR.

E. BELAND, INSPECTOR.

J. C. ROULEAU, INSPECTOR.

Pre- sent.	None.	None.	373	8·33	Rice					907 Addition of starch, adulterated.
None.	None.	"	482							908 Genuine, 90 per cent.
"	"	"	490							909 " 92 "
"	"	"	478							910 " 89 "
Pre- sent.	Pre- sent.	Pre- sent.	271	52·76	Maize	0·60	8·45	6·60		911 Alum phosphate mixture, ad- ulterated.
"	"	"	495	4·05	"	0·80	8·25	5·01		912 Alum phosphate mixture, ad- ulterated.
None	None	None.	504							913 Genuine, 95 per cent.
"	"	"	484							914 " 91 "



Date of Collection.	Nature of Sample.	No. of Sample.	Name and address of Vendor.	COST.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

1909. DISTRICT OF ST. HYACINTHE—

Jan.	14	Cream of Tartar	915 C. O. Genest & Fils, 1/4 " .. Sherbrooke.	10	E. W. Gillett Co., Guaranteed to be absolutely pure.
"	14	"	916 H. H. Edwards, 1/4 " .. Coaticook.	09	Mathewsons Sons, .. .. .
"	19	"	917 Adelard Robert, 1/4 " .. Farnham.	10	Hudon & Orsali, Box marked pure ground cream of tartar.
"	19	"	918 N. Mitchell & Co., 1/4 " .. Granby.	10	L. Chaput, Fils & .. .. .
"	20	"	919 R. Goold, St. Jean, 1/4 " .. Que.	10	Forbes Bros., Mont .. .. .
"	21	"	920 J. A. Girard, St. Hy 1/4 " .. acinthe.	10	Not known .. .. .
"	21	"	921 E. Benoit, St. Hy- 1/4 " .. acinthe.	09	Herron, Leblanc & .. .. .

1909. DISTRICT OF MONTREAL—

Jan.	4	Cream of Tartar	32646 J. H. Goyer, 4451 St. 1/2 lb.. Catherine's & Westmount.	20	.. .. .
"	4	"	32647 E. Gervais, 4500 St. 1/2 " .. Catherine's & Westmount, Que.	20	Not given. .. .. .
"	4	"	32648 Samuel Smith & Co., 1/2 " .. 4206 St. Catherine's Westmount, Que.	20	S. H. Ewing & Sons, .. .. .
"	4	"	32649 W. Elliott, 300 Greene 1/2 " .. Ave., Westmount.	15	Unknown. .. .. .
"	4	"	32650 J. B. Banville, 193 St. 1/2 " .. George St., Montreal	20	Not given. .. .. .
"	4	"	32651 Walter Paul, 80 Uni- 2 tins versity St., Montreal	30	Put up expressly for vendor in 1/2 lb. tins.
"	5	"	32652 H. G. Smith, 1551 St. 1/2 lb.. Urbain, Ville St. Louis.	20	S. H. Ewing & Sons, .. .. .
"	5	"	32653 D. Hamilton, 77 Fair- 1/2 " .. mount, V. St. Louis	20	Not known. ....
"	5	"	32654 W. Cairns, 81 St. Via- 1/2 " .. teur, Ville St. Louis	20	Not known. ....
"	7	"	32655 Richer & Page, Val- 1/2 " .. leyfield, P. Q.	20	.. .. .
"	7	"	32656 O. Longtin, Valley- 1/2 " .. field, P. Q.	20	L. Chaput, Fils & Co. .. .. .
"	9	"	32657 A. Montpetit, St. Anne 1/2 " .. de Bellevue, P. Q.	18	L. Chaput, Fils & .. .. .
"	11	"	32658 George Dixon, Hunt- 1/2 " .. ington, P. Q.	20	Not known. ....
"	12	"	32659 C. Martineau. St. 1/2 " .. Gabriel de Brandon	20	Not known. ....
"	22	"	32660 N. Boivin, Lachute 2 pkgs Mills, P. Q.	20	C. H. Cochrane & Co. Guaranteed pure. Ottawa.



SESSIONAL PAPER No. 14  
CREAM OF TARTAR.

RESULTS OF ANALYSIS.											Remarks and Opinion of the Chief Analyst.
Preliminary Examination.				Determinations.						No. of Sample.	
Starch.	Sulphates.	Phosphates	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.	Calcium Oxide (Ca. O.)		
Continued.											
None	None.	None.	534	.....	.....	.....	.....	.....	.....	915	Genuine, 100 per cent.
Pre- sent.	Pre- sent.	Pre- sent.	494	0.76	Maize	0.30	8.35	7.35	8.60	916	Alum phosphate mixture, adulterated.
None.	None.	None.	474	.....	.....	.....	.....	.....	.....	917	Genuine, 89 per cent.
"	"	"	476	.....	.....	.....	.....	.....	.....	918	" 89 "
"	"	"	482	..	.....	.....	.....	.....	.....	919	" 90 "
Pre- sent.	Pre- sent.	Pre- sent.	254	58.81	Maize	0.50	8.45	6.48	...	920	Alum phosphate mixture, adulterated.
"	"	"	518	3.73	"	0.50	8.25	4.44	.....	921	Alum phosphate mixture, adulterated.

J. J. COSTIGAN, INSPECTOR.

Pre- sent.	Pre- sent.	Pre- sent.	468	3.13	Maize	0.60	6.90	6.60	...	32646	Alum phosphate mixture, adulterated.
"	"	"	468	3.43	"	0.40	6.90	7.49	.....	32647	Alum phosphate mixture, adulterated.
"	"	"	495	2.89	"	0.20	7.45	8.10	.	32648	Alum phosphate mixture, adulterated.
"	"	"	487	2.82	"	0.40	8.45	8.41	...	32649	Alum phosphate mixture, adulterated.
"	"	"	506	1.91	"	0.70	6.20	3.63	.....	32650	Alum phosphate mixture, adulterated.
None	None	None	488	.....	.....	.....	.....	.....	.....	32651	Genuine, 92 per cent.
Pre- sent.	"	"	482	2.56	"	.....	.....	.....	.....	32652	Contains a little starch, appar- ently accidental. Doubtful.
None	"	"	472	.....	.....	.....	.....	.....	.....	32653	Genuine, 89 per cent.
Pre- sent.	"	"	285	16.87	"	.....	.....	.....	.....	32654	Adulterated with corn starch.
"	Pre- sent.	Pre- sent.	497	6.28	"	0.90	8.72	5.40	...	32655	Alum phosphate mixture, adulterated.
None	None	None	470	...	.....	.....	.....	.....	.....	32656	Genuine, 89 per cent.
"	"	"	496	.....	.....	.....	.....	.....	.....	32657	" 93 "
"	"	"	476	.....	.....	.....	.....	.....	.....	32658	" 89 "
Pre- sent.	Pre- sent.	Pre- sent.	456	5.15	"	0.40	0.45	1.23	.....	32659	Small qty. alum phosphate, Doubtful.
None	None	None	474	...	.....	.....	.....	.....	.....	32660	Genuine, 89 per cent.



Date of Collection	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Price.		
1999.							
DISTRICT OF OTTAWA.—							
Jan.	5 Cream of Tartar	22771	A. Bergeron Hawkesbury	lb.	20	Pure Gold Mfg. Co., Toronto	Sold as cream of tartar
"	"	22772	Banford & Dunning, Hawkesbury	"	"	F. F. Dalley Co., Ltd., Hamilton	"
"	"	22773	The Foster, Bennett Co., Ltd., River Desert	"	25	H. N. Bate & Sons, Ottawa	"
"	"	22774	Alexander MacLaren, Wakefield	"	18	Nat. Drug & Chemical Co., Ottawa	"
"	"	22775	George Patterson, Wakefield	"	20	H. N. Bate & Sons, Ottawa	"
"	"	22776	Chester Casselman, Chesterville, O.	"	18	Not known	"
"	"	22777	J. T. Kearns, Chesterville, O.	"	20	Forbes Bros., Montreal	"
"	"	22778	Lewis Bros., Richmond, O.	"	16	Not known	"
"	"	22779	W. W. Mann & Co., Stittsville, O.	"	20	Galbraith & Sons, Montreal	"
"	"	22780	A. Ault, Kemptville	"	20	Mr. Sanders, Kemptville	"
"	"	22781	L. M. Davidson, Kemptville	"	20	Gilmour & Co., Brockville	Sample from box marked pure cream of tartar
"	"	22782	H. Richardson, Ottawa	"	18	C. H. Cochrane & Co., Ottawa	Sold as pure cream of tartar
"	"	22783	E. J. Mills, Ottawa	"	20	F. J. Castle Co., Ottawa	Sold as cream of tartar
"	"	22784	Geo. J. Young, Ottawa	"	20	H. N. Bate & Sons, Ottawa	"
"	"	22785	W. J. Eastcott, Ottawa	"	20	C. H. Cochrane & Co., Ottawa	"
1900.							
DISTRICT OF KINGSTON.—							
Jan.	6 Cream of Tartar	39401	A. Glover, Kingston	$\frac{1}{2}$ lb.	20	H. Skinner & Co., Kingston	"
"	"	39402	H. M. Stover, Kingston	"	20	A. Maclean, Kingston	"
"	"	39403	C. Litton, Kingston	$\frac{1}{4}$ "	30	C. H. Cochrane & Co., Ottawa	"
"	"	39404	F. Ostler, Kingston	$\frac{1}{2}$ "	20	C. H. Cochrane & Co., Ottawa	"
"	"	39405	W. J. Nesbitt, Kingston	$\frac{1}{2}$ "	30	McLarens, Hamilton	"
"	"	39406	C. H. Pickering, Kingston	$\frac{1}{2}$ "	20	Gorman & Eckert, London	"
"	"	39407	C. Saunders, Kingston	$\frac{1}{2}$ "	20	S. H. & W. H. Ewing, Montreal	"
"	"	39408	Anderson Bros., Kingston	$\frac{1}{2}$ "	25	McLarens, Hamilton	"
"	"	39409	J. Kelly, Kingston	$\frac{1}{2}$ "	25	Pure Gold, Toronto	"
"	"	39410	Kirk & Lee	$\frac{1}{2}$ "	30	Geo. Robertson & Sons, Kingston	"



SESSIONAL PAPER No. 14  
CREAM OF TARTAR.

## RESULTS OF ANALYSIS.

Preliminary Examination.				Determinations.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
Starch.	Sulphates.	Phosphates	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.	Calcium Tartrate		
Trace.	None.	None.	488	0.03						22771	Genuine, 91 per cent.
None.	"	"	488							22772	Genuine, 92 per cent
"	"	"	530							22773	" 99 "
"	"	"	430						9.28	22774	" 81 "
"	"	"	430						1.85	22775	" 81 "
None	None.	None.	476							22776	" 89 "
Trace.	"	"	489	0.28	Maize					22777	" 91 "
Pres- ent.	Trace.	"	487	1.54	"	0.50			1.06	22778	Traces of Alum.....—Doubt- ful.
None.	None	"	480							22779	Genuine, 90 per cent.
"	"	"	480							22780	" 90 "
Pres- ent.	Pres- ent.	"	493	11.55	"	2.20		10.63		22781	Alum mixture, adulterated.
None	None	None.	506							22782	Genuine, 95 per cent
"	"	"	472							22783	" 89 "
Pres- ent.	Pres- ent.	"	506	10.22	"	1.60		6.42		22784	Alum mixture, adulterated.
None.	None.	"	510							22785	Genuine, 96 per cent.

## JAS. HOGAN, INSPECTOR.

None	None.	None.	504							39401	Genuine, 95 per cent.
"	"	"	498							39402	" 94 "
"	"	"	500							39403	" 94 "
"	"	"	506							39404	" 95 "
"	"	"	482							39405	" 90 "
"	"	"	488							39406	" 92 "
"	"	"	476							39407	" 89 "
Trace, pres't.	"	"	490						8.00	39408	" 92 "
none.	"	"	530							39409	" 99 "
"	"	"	486							39410	" 91 "



1 GEORGE V., A. 1911  
BULLETIN No. 180—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		
1909.							
DISTRICT OF KINGSTON—							
Jan. 11	Cream of Tartar	39411	R. Elvin, Belleville	$\frac{3}{4}$ " ..	30	E. W. Gillett, Toronto.	.....
" 11	" ..	39412	H. E. Fairfield, "	$\frac{1}{2}$ " ..	15	J. M. Lowes, Toronto.	.....
" 11	" ..	39413	J. Curtis, Port Hope.	$\frac{1}{2}$ " ..	20	C. H. Cochrane, Ottawa.	.....
" 11	" ..	39414	F. H. Brown "	$\frac{1}{2}$ " ..	20	Pure Gold, Toronto.	.....
" 12	" ..	39415	A. J. Roulty, Peterboro.	$\frac{1}{2}$ " ..	20	Greig Co., Toronto.	.....
DISTRICT OF TORONTO—							
Jan. 4	Cream of Tartar	36151	F. G. Wilson, Toronto	$\frac{1}{2}$ lb. ..	20	Dalton Bros. Toronto	Sample from tin labelled cream of tartar.
" 4	" ..	36152	J. C. Doyle "	$\frac{1}{2}$ " ..	20	R. B. Hayhoe & Co., Toronto.	Sample from drawer labell'd cream of tartar
" 5	" ..	36153	Crapper's Grocery, Toronto.	$\frac{1}{2}$ " ..	20	Dalton Bros., Toronto	Sample from tin labelled Dalton's extra select cream of tartar.
" 7	" ..	36154	Arthur Butcher, Toronto.	$\frac{1}{2}$ " ..	20	" "	Sample from tin labelled Dalton's extra select cream of tartar.
" 7	" ..	36155	Mrs. M. Crittall, Toronto.	$\frac{1}{2}$ " ..	20	Jno. Sloan & Co., Toronto.	.....
" 12	" ..	36156	D. Mahony, Hamilton	$\frac{1}{2}$ " ..	20	Not known	.....
" 13	" ..	36157	Holt & Co., "	$\frac{1}{2}$ " ..	20	"	Labelled Gillett's cream of tartar.
" 14	" ..	36158	Campaigne Bros, Niagara Falls Centre.	$\frac{1}{2}$ " ..	20	Young Winfield, Hamilton.	Sample from tin labelled cream of tartar.
" 15	" ..	36159	W. T. Richardson, St. Catharines.	$\frac{1}{2}$ " ..	18	Dalton Bros., Toronto	Sample from tin labelled cream of tartar, from Dalton Bros, Toronto.
" 15	" ..	36160	Becker & Co., St. Catharines.	$\frac{1}{2}$ " ..	20	Not known.....	Sample from tin labelled cream of tartar.
" 20	" ..	36161	J. H. Hall, Toronto	$\frac{1}{2}$ " ..	20	Dalton Bros., Toronto	Sample from tin labelled cream of Tartar.
" 20	" ..	36162	A. L. Anderson, West Toronto.	$\frac{1}{2}$ " ..	18	R. B. Hayhoe & Co., Toronto.	Sample from tin labelled cream of tartar.
" 20	" ..	36163	Adamson & Golding, West Toronto.	$\frac{1}{2}$ " ..	15	Dalton Bros., Toronto	Sample from tin labelled cream of tartar.
" 21	" ..	36164	J. J. Lucas, East Toronto.	$\frac{1}{2}$ " ..	20	" "	Sample from tin lab ed Dalton's extra select cream of tartar.
" 21	" ..	36165	F. H. Bible, Toronto	$\frac{1}{2}$ " ..	20	" "	Sample from tin labelled cream of tartar



## SESSIONAL PAPER No. 14

## CREAM OF TARTAR.

RESULTS OF ANALYSIS.											Remarks and Opinion of the Chief Analyst.
Preliminary Examination.				Determinations.						No. of Sample.	
Starch.	Sulphates.	Phosphates	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.	Calcium Oxide (Ca.O).		
Continued.											
None.	None.	None.	534	....	.....	.....	.....	.....	.....	39411	Genuine, 100 per cent.
"	"	"	484	....	.....	.....	.....	.....	.....	39412	" 91 "
"	"	"	500	....	.....	.....	.....	.....	.....	39413	" 94 "
"	"	"	510	.....	.....	.....	.....	.....	.....	39414	" 96 "
"	"	"	516	....	.....	.....	.....	.....	.....	39415	" 97 "
H. J. DAGER, INSPECTOR.											
Pre- sent.	Pre- sent.	None.	527	8.83	Maize	0.40	....	6.73	0.60	36151	Alum mixture, adulterated.
None	None.	None.	478	.....	.....	.....	.....	.....	.....	36152	Genuine, 89 per cent.
Pre- sent.	Pre- sent.	"	476	11.80	"	2.00	.....	10.02	3.00	36153	Alum mixture, adulterated.
"	"	"	478	11.42	"	1.70	....	10.60	3.40	36154	"
"	"	"	508	8.03	"	1.50	.....	5.23	1.40	36155	" "
"	"	"	497	28.13	"	6.10	.....	18.27	0.80	36156	" "
"	"	"	182	27.18	"	3.20	....	8.14	0.60	36157	" "
None.	None.	None.	499	0.21	"	....	.....	0.20	.....	36158	Genuine, 93 per cent.
Pre- sent.	Pre- sent.	"	485	7.93	"	1.40	....	8.48	3.00	36159	Alum mixture, adulterated.
"	Trace.	"	484	1.77	"	0.20	.....	0.78	2.00	36160	Trace of starch and alum. Doubtful.
"	Pre- sent.	"	487	11.89	"	2.00	.....	10.74	3.00	36161	Alum mixture, adulterated.
None	None.	"	506	.....	.....	.....	.....	.....	.....	36162	Genuine, 95 per cent.
Pre- sent.	Pre- sent.	"	501	8.79	"	2.20	.....	8.41	2.40	36163	Alum mixture, adulterated.
"	"	"	484	11.69	"	2.50	....	10.15	3.00	36164	" "
"	"	"	491	10.89	"	3.20	....	9.75	2.60	36165	" "



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		
1909.							
DISTRICT OF LONDON—							
Jan.	6 Cream of Tartar	30552	Sturdy & Co., Gode-rich.	$\frac{1}{2}$ lb..	20	Canada Spice & Grocery Co., London, O.	
"	6 "	30554	P. J. Dean, Gode-rich	$\frac{1}{2}$ " ..	18	Not known .....	
"	7 "	30557	O. C. Whitely, "	$\frac{1}{2}$ " ..	15	A. M. Smith, & Co., London, Ont.	
"	8 "	30561	Cardino Bros., Sea-forth.	$\frac{1}{2}$ " ..	20	Gorman, Eckert & Co., London, Ont.	
"	8 "	30562	Mathew Williams, Sea-forth.	$\frac{3}{4}$ " ..	30	E. W. Gillett Co., Toronto, Ont.	
"	11 "	30564	Harrison Wiltse, Clinton.	$\frac{1}{2}$ " ..	20	Robt. Greig & Co., Toronto, Ont.	
"	11 "	30566	Thos Beacom, Clinton	$\frac{1}{2}$ " ..	20	Gorman & Eckert, London, Ont.	
"	12 "	30570	M. Durkin Mitchell.	$\frac{1}{2}$ " ..	20	Canada Spice & Grocery Co., London, O.	
"	13 "	30573	W. R. Butcher, St. Marys.	$\frac{1}{2}$ " ..	20	McLarens, Hamilton	
"	13 "	30574	Peckard & Fleming, St. Marys.	$\frac{1}{2}$ " ..	20	Gorman & Eckert London, Ont.	
"	14 "	30577	Edward O'Flaherty, Stratford.	$\frac{1}{2}$ " ..	20	Hamilton Coffee and Spice Co., Hamil'n.	
"	14 "	30579	A. G. Lloyd, Stratford.	$\frac{3}{4}$ " ..	30	Gorman & Eckert, London, Ont.	
"	14 "	30580	Barnsdale Trading Co., Stratford.	$\frac{1}{2}$ " ..	20	McLarens, Hamilton	Furnished as compound.
"	14 "	30582	Walsh Bros., Stratford.	$\frac{1}{2}$ " ..	20	Robt. Greig & Co., Toronto, Ont.	
"	16 "	30585	J. A. McRae & Son, Guelph.	$\frac{1}{2}$ " ..	20	Toddhunter & Mitchell, Toronto, O.	

DISTRICT OF WINDSOR

Jan.	6 Cream of Tartar	34713	Penney Bros. & McIntosh, London, O.	$\frac{1}{2}$ lb..	20	Canada Spice & Grocery Co., London, O.	
"	6 "	34714	John Procter, London, Ont.	$\frac{1}{2}$ " ..	20	London Drug Co.,	
"	6 "	34715	Marr Bros., London, Ont.	$\frac{1}{2}$ " ..	20	Gorman, Eckert & Co., London, Ont.	
"	6 "	34716	Wm. Smith, London, Ont.	$\frac{1}{2}$ " ..	20	Gorman, Eckert & Co., London, Ont.	
"	6 "	34717	A. Rosenberger, London.	$\frac{1}{2}$ " ..	20	A. M. Smith & Co., London, Ont.	
"	6 "	34718	A. Johnson, London, Ont.	$\frac{1}{2}$ " ..	20	E. W. Gillett & Co., Toronto, Ont.	
"	6 "	34719	John Deprose, London, Ont.	$\frac{1}{2}$ " ..	20	Canada Spice & Grocery Co., London, O.	
"	6 "	34720	Hockin Bros., London, Ont.	$\frac{1}{2}$ lb..	20	Gorman, Eckert & Co., London, Ont.	
"	6 "	34721	Ryan & Russell, London, Ont.	$\frac{1}{2}$ " ..	20	Gorman, Eckert & Co., London, Ont.	
"	6 "	34722	A. McCormick & Son, London, Ont.	$\frac{1}{2}$ " ..	20	Canada Spice and Grocery Co., London, Ont.	



SESSIONAL PAPER No. 14  
CREAM OF TARTAR.

## RESULTS OF ANALYSIS.

[illegible]

T. KIDD, INSPECTOR.

None	None.	None.	500	.....	.....	30552	Genuine, 94 per cent.
"	"	"	460	.....	.....	30554	" 87 "
"	"	"	534	.....	.....	30557	" 100
"	"	"	482	.....	.....	30561	" 90
"	"	"	534	.....	.....	30562	" 100
"	"	"	476	.....	.....	30564	" 89
"	"	"	514	.....	.....	30566	" 97 "
"	"	"	480	.....	.....	30570	" 90 "
"	"	"	508	.....	.....	30573	" 95 "
"	"	"	484	.....	.....	30574	" 91 "
"	"	"	478	.....	.....	30577	" 89 "
"	"	"	510	.....	.....	30579	" 94 "
Pre- sent.	Trace.	"	373	20.74 Maize	0.30	0.67	30580 Starch and a trace of alun..
None.	None.	"	502	.....	.....		30582 Genuine, 94 per cent.
"	"	"	500	.....	.....		30585 " 94 "

J. TALBOT, INSPECTOR.

None.	None.	None.	502	34713	Genuine, 94 per cent.
"	"	"	484	34714	" 91 "
"	"	"	476	34715	" 89 "
"	"	"	480	34716	" 90 "
"	"	"	520	34717	" 98 "
"	"	"	532	34718	" 100 "
"	"	"	498	34719	" 94 "
"	"	"	498	34720	" 94 "
"	"	"	496	34721	" 93 "
"	"	"	502	34722	" 94 "



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		
1909.							
DISTRICT OF WINDSOR—							
Jan.	6 Cream of Tartar	34723	N. McLeod, London, Ont.	$\frac{1}{2}$ " ..	20	Gorman, Eckert & Co., London, Ont.	.....
"	6 "	34724	F. C. Toon, London, Ont.	$\frac{1}{2}$ " ..	20	Gorman Eckert & Co., London, Ont.	.....
"	6 "	34725	G. Armstrong, London, Ont.	$\frac{1}{2}$ " ..	20	Not known....	.....
"	6 "	34726	H. Ranahan, London, Ont.	$\frac{1}{2}$ " ..	20	Canada Spice and Grocery Co., London, Ont.	.....
"	6 "	34727	W. Bloomfield, London, Ont.	$\frac{1}{2}$ " ..	20	Gorman, Eckert & Co., London, Ont.	.....
DISTRICT OF MANITOBA—							
Jan.	11 Cream of Tartar	35801	S. Elliott & Co., Winnipeg.	$\frac{1}{2}$ lb..	20	Not given.	.....
"	11 "	35802	C. Hoffman & Son, Winnipeg.	$\frac{1}{2}$ " ..	20	A. Macdonald & Co., Winnipeg, Man.	.....
"	11 "	35803	G. Otto, Winnipeg	$\frac{1}{2}$ " ..	20	The Codville Co., Winnipeg, Man.	.....
"	11 "	35804	Morris Macklin, Winnipeg.	$\frac{1}{2}$ " ..	20	The Gold Standard Mfg. Co., Winnipeg, Man.	.....
"	11 "	35805	G. Guirgnard, Winnipeg.	$\frac{1}{2}$ " ..	20	Campbell Bros., Wilson, Winnipeg, Man.	.....
"	13 "	35806	J. F. Price & Co., Brandon.	$\frac{1}{2}$ " ..	20	Not given.	.....
"	13 "	35807	Mutter & Lynch, Brandon.	$\frac{1}{2}$ " ..	20	"	.....
"	13 "	35808	A. Grant, Brandon.	$\frac{1}{2}$ " ..	25	The Codville Co., Winnipeg, Man.	.....
"	13 "	35809	Murdock & Wilson, Virden.	$\frac{1}{2}$ " ..	25	Gorman, Eckert & Co., London, Ont.	.....
"	13 "	35810	McLellan & English, Virden.	$\frac{1}{2}$ " ..	20	R. Mackenzie & Co., Winnipeg, Man.	.....
"	13 "	35811	Clingan, Scales & Carscadden, Virden.	$\frac{1}{2}$ " ..	25	E. W. Gillett Co., Ltd., Toronto.	.....
"	14 "	35812	The A. E. Hill Co., Hartnev.	$\frac{1}{2}$ " ..	25	E. W. Gillett Co., Ltd., Toronto.	.....
"	19 "	35813	Smellie Bros., Ltd., Shoal Lake.	$\frac{1}{2}$ " ..	25	The Blue Ribbon, Ltd., Winnipeg, Man.	Pure cream of tartar.
"	19 "	35814	The Farmers Trading Co., Shoal Lake.	$\frac{1}{2}$ " ..	25	Gorman, Eckert Co., Ltd., London, Ont.	Germans pure ground cream of tartar.
"	20 "	35815	Chapman & Co., Strathclair.	$\frac{1}{2}$ " ..	25	E. W. Gillett Co., Ltd., Toronto.	.....







Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

1909.

DISTRICT OF CALGARY—

Jan.	18	Cream of Tartar	35351 Wood & Green, Cal-gary.	½ lb.	25	E. W. Gillett & Co., Ltd., Toronto.	
"	20	"	35352 D. Scharf, Calgary.	½ "	25	E. W. Gillett & Co., Ltd., Toronto.	
"	20	"	35353 A. R. Peters, Calgary.	½ "	25	G. F. & J. Galt. Co., Winnipeg.	
"	22	"	35354 H. W. Irland, Medicine Hat.	1 "	30	Balfour & Co., Hamilton.	
"	22	"	35355 D. Milne Co., Ltd., Medicine Hat.	½ "	25	Blue Ribbon, Ltd., Winnipeg.	
"	22	"	35356 L. B. Cochrane, Ltd., Medicine Hat.	½ "	20	Gold Standard Mfg. Co., Winnipeg.	
"	22	"	35357 Spencer & Todd, Medicine Hat.	½ "	25	Balfour & Co., Hamilton.	
"	22	"	35358 Stewart Tweed, Ltd., Medicine Hat.	½ "	25	McLarens, Ltd., Hamilton.	
"	29	"	35359 Capital Mercantile Co., Edmonton.	½ "	25	Pure Gold Mfg. Co., Toronto.	
"	29	"	35360 Hudson Bay Co., Edmonton.	½ "	25	E. W. Gillett & Co., Ltd., Toronto.	
"	29	"	35361 Acme Co., Ltd., Edmonton.	"	20	E. W. Gillett & Co., Ltd., Toronto.	
"	29	"	35362 Duncan Bros. & Butler, Edmonton.	½ "	20	E. W. Gillett & Co., Ltd., Toronto.	
"	29	"	35363 Hallier & Aldridge, Edmonton.	½ "	20	E. W. Gillett & Co., Ltd., Toronto.	
"	29	"	35364 J. H. Morris & Co., Edmonton.	½ "	20	E. W. Gillett & Co., Ltd., Toronto.	
"	29	"	35365 C. E. Thompson, Edmonton.	½ "	25	E. W. Gillett & Co., Ltd., Toronto.	

DISTRICT OF VANCOUVER

Jan.	14	Cream of Tartar	37536 F. Wright, Vancouver, British Columbia.	¼ lb.	45	E. W. Gillett & Co., Ltd., Toronto.	Absolutely pure.
"	14	"	37537 Atzell & Clark, Vancouver, British Columbia.	½ "	20	Empress Mfg. Co., Vancouver.	
"	14	"	37538 McDowell & Kinnis, Vancouver, B.C.	2 pkgs	20	McLaren Mfg. Co.,	Ground pure from selected goods.
"	14	"	37539 Anthony Bros., Vancouver, B.C.	½ lb.	15	E. W. Gillett & Co., Ltd., Toronto.	
"	14	"	37540 Mrs. C. H. Scott, Vancouver, B.C.	½ "	20	W. Braid & Co., Vancouver.	Ground absolutely pure.
"	14	"	37541 M. J. Halpin, Vancouver, B.C.	3 pkgs	25	E. R. Durke, Philadelphia.	
"	14	"	37542 S. F. McCreedy, Vancouver, B.C.	1 tin.	25	W. Braid & Co., Vancouver.	
"	14	"	37543 The People's Grocery, Fairview, Vancouver.	1 tin.	20	Not known.	Guaranteed to be absolutely pure.
"	14	"	37544 Rayment & Cram, Vancouver.	3 pkgs	30	Mayell & Co., Toronto.	Absolutely pure.



SESSIONAL PAPER No. 14  
CREAM OF TARTAR.

RESULTS OF ANALYSIS.

Preliminary Examination.				Determinations.					Calcium Tartrate.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.			

R. W. FLETCHER, INSPECTOR.

None.	None	None	532	.	.	.	.	.	.	35351	Genuine, 100 per cent.
"	"	"	498	.	.	.	.	.	.	35352	" 94 "
"	"	"	502	.	.	.	.	.	.	35353	" 94 "
"	"	"	496	.	.	.	.	.	.	35354	" 93 "
"	"	"	504	.	.	.	.	.	.	35355	" 95 "
"	"	"	514	.	.	.	.	.	.	35356	" 97 "
"	"	"	518	.	.	.	.	.	.	35357	" 98 "
"	"	"	474	.	.	.	.	.	.	35358	" 89 "
"	"	"	490	.	.	.	.	.	.	35359	" 92 "
"	"	"	532	.	.	.	.	.	.	35360	" 100 "
"	"	"	532	.	.	.	.	.	.	35361	" 100 "
"	"	"	532	.	.	.	.	.	.	35362	" 100 "
"	"	"	530	.	.	.	.	.	.	35363	" 99 "
"	"	"	532	.	.	.	.	.	.	35364	" 100 "
"	"	"	532	.	.	.	.	.	.	35365	" 100 "

J. F. POWER, INSPECTOR.

None.	None.	None.	532	.	.	.	.	.	.	37536	Genuine, 100 per cent.
"	"	"	466	.	.	.	.	.	12.06	37537	" 87 "
"	"	"	482	.	.	.	.	.	.	37538	" 90 "
"	"	"	532	.	.	.	.	.	.	37539	" 100 "
"	"	"	476	.	.	.	.	.	10.20	37540	" 89 "
"	"	"	530	.	.	.	.	.	.	37541	" 90 "
"	"	"	460	.	.	.	.	.	11.13	37542	" 86 "
"	"	"	466	.	.	.	.	.	12.00	37543	" 88 "
"	"	"	468	.	.	.	.	.	11.00	37544	" 89 "



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

1909. DISTRICT OF

Jan.	15	Cream of Tartar	37545 Labelle & Co., Van-	2 tins.	40	Wilson Bros., Vic-	
			cover.			toria.	
"	15	"	37546 D. Lam & Co., Van-	3 tins.	30	Empress Mfg. Co.,	
			cover.			Vancouver.	
"	22	"	37547 Findlay Bros., Van-	1 pkg.	1	Pure Gold Mfg. Co.,	Quality guaran-
			cover.			Toronto.	teed.
"	22	"	37548 A. Nadeau, Mount	$\frac{1}{2}$ lb.	20	Not known.....	
			Pleasant, Vancou-				
			ver.				
"	26	"	37549 Royal Grocery, Van-	$\frac{1}{2}$ "	20	Not known.....	Guaranteed to be
			cover.				absolutely pure
"	26	"	37550 Hampton Bros., Van-	$\frac{1}{2}$ "	25	Dalton's or Gillett's.	
			cover.				

1909. DISTRICT OF VICTORIA--

Jan.	20	Cream of Tartar	39259 Windsor Grocery Co.,	$\frac{1}{2}$ lb..	25	Pioneer Coffee & Spice Mills, Vic-	Hygenic cream
			Victoria, B.C.			toria.	of tartar
"	20	"	39260 Copas & Young, Vic-	$\frac{1}{2}$ "	20	E. W. Gillett & Co.,	double refined.
			toria, B.C.			Ltd., Toronto.	Gillett's ground
"	20	"	39261 W. Speed, Victoria,	$\frac{1}{2}$ "	25	E. W. Gillett & Co.,	cream of tar-
			B.C.			Ltd., Toronto.	tar.
"	20	"	39262 The Vic. Rochdale	$\frac{1}{2}$ "	20	Wilson Bros., Vic-	Gillett's ground
			Co-op. Assn., Ltd.,			toria.	cream of tar-
			Victoria, B.C.				tar.
"	20	"	39263 Wm. B. Hall, Vic-	$\frac{1}{2}$ "	20	Pioneer Coffee & Spice Mills.	
			toria, B.C.				
"	21	"	39264 Jalland Bros., Vic-	$\frac{1}{2}$ "	20	Pioneer Coffee & Spice Mills.	
			toria, B.C.				
"	21	"	39265 Acton Bros., Victoria,	$\frac{1}{2}$ "	20	E. W. Gillett & Co.,	
			B.C.			Ltd., Toronto.	
"	21	"	39266 L. Dickinson, Vic-	3 pkts.	30	E. R. Durkee & Co.,	"Gauntlet"
			toria, B.C.			New York.	Brand.
"	21	"	39267 J. Renouf, Victoria,	$\frac{1}{2}$ lb..	25	E. W. Gillett & Co.,	
			B.C.			Ltd., Toronto.	
"	21	"	39268 Bailey & Blomquist,	$\frac{1}{2}$ "	20	Empress Mfg. Co.,	
			Victoria, B.C.			Vancouver.	
"	21	"	39269 F. E. Plummer, Vic-	$\frac{1}{2}$ "	20	E. W. Gillett & Co.,	
			toria, B.C.			Ltd., Toronto.	
"	21	"	39270 W. A. Jameson Coffee	$\frac{1}{2}$ "	15	F. F. Dalley Co.,	
			Co., Victoria, B.C.			Hamilton.	
"	23	"	39271 Fred. Carne, Victoria,	$\frac{1}{2}$ tin..	25	Pure Gold Mfg. Co.,	"Pure Gold"
			B.C.			Toronto.	quality guar-
"	25	"	39272 Dixie H. Ross & Co.,	$\frac{1}{2}$ "	25	W. A. Jameson,	anteed.
			Victoria, B.C.			Coffee Co., Ltd.,	"Victoria"
						Victoria.	Brand.
"	2	"	39273 Harrison & McDon-	3 pkgs	30	A. Shilling & Co.,	"Shilling's" Best
			ald, Victoria, B.C.			San Francisco.	



## CREAM OF TARTAR.

[illegible]

None.	None.	None.	464	.....	.....	.....	12.06	37545	Genuine, 87 per cent.		
Pre- sent.	Pre- sent.	" ..	447	6.74	Maize	1.20	.....	11.42	.....	37546	Alum mixture, adulterated.
None.	None.	None	474	.....	.....	.....	10.20	37547	Genuine, 89 per cent.		
" ..	" ..	" ..	530	.....	.....	.....	.....	37548	" 99 "		
" ..	" ..	" ..	466	.....	.....	.....	12.00	37549	" 88 "		
" ..	" ..	" ..	530	.....	.....	.....	.....	37550	" 99 "		

None.	None.	None.	472				2.78	39259	Genuine,	89	per cent.
"	"	"	532					39260	"	100	"
"	"	"	532					39261	"	100	"
"	"	"	532					39262	"	100	"
"	"	"	460				12.06	39263	"	86	"
"	"	"	464				11.13	39264	"	87	"
"	"	"	530					39265	"	99	"
"	"	"	530					39266	"	99	"
"	"	"	532					39267	"	100	"
Pre- sent. None.	Pre- sent. None.	None	462	4 66	Maize	1 20	10.43	39268	Alum mixture, adulterated.		
"	"	"	532					39269	Genuine,	100	per cent.
"	"	"	474				10.06	39270	"	89	"
"	"	"	520					39271	"	98	"
"	"	"	476				10.20	39272	"	89	"
"	"	"	528					39273	"	99	"



APPENDIX B.

BULLETIN No. 181--ARSENIC. AS AN IMPURITY IN DRUGS.

OTTAWA, June 8, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—In the year 1900, there occurred in Manchester, England, a large number of cases of arsenical poisoning. It was discovered that the poison was present in beer which had been made from commercial glucose. Other sources of arsenic in beer were found in malt which had been dried in kilns to which gases from pyritous coal had access. Further research showed that decided traces of arsenic occurred in many chemical products whose manufacture involved the use of sulphuric acid; it being already known that crude sulphuric acid (oil of vitriol) is usually contaminated with arsenic.

For the information of this department there were examined at that time a number of samples of drugs, as found on the Canadian market, for the purpose of ascertaining whether any of these contained distinct traces of arsenic. While most samples were practically free from the poison, it was found that arsenic was distinctly present in certain sulphates, and particularly in phosphate of soda. The amounts were not so large as to be alarming; but were sufficient to make it impossible to regard these drugs as meeting pharmacopœal requirements.

The present bulletin contains a report upon 448 samples of sulphate of magnesia, sulphate of soda and phosphate of soda, three drugs which are as likely as any to contain arsenic as an impurity. It is satisfactory to find that on the total of 448 samples, 336 contain no arsenic, 86 contain less than one half of a milligram per hundred grams, twenty less than one milligram and six over one milligram, divided as follows :—

ARSENIC.					
	None.	Less than one-half milligram per hundred grams.	Less than one milligram per hundred grams.	More than one milligram per hundred grams.	Total.
Sulphate of Magnesia.....	120	26	4	0	150
Sulphate of Soda.....	99	35	10	6	150
Phosphate of Soda .....	117	25	6	0	148
	336	86	20	6	448

The British Pharmacopœia fixes the dose of Arsenious Acid at  $\frac{1}{80}$  to  $\frac{1}{15}$  of a grain, corresponding to 0.001 and 0.004 milligrams.



## SESSIONAL PAPER No. 14

The maximum single dose for each of the three salts mentioned is 14·2 grams and, as the largest amount of arsenic found is 10·5 milligrams per one hundred grams, it follows that not more than one and one half milligram could have been absorbed, which would not be considered a dangerous dose, four (4) milligrams being allowed.

I beg to recommend the publication of this report as Bulletin No. 181.

I have the honour to be, sir,

Your obedient servant,

ALP. LEMOINE,  
*Acting Chief Analyst.*



BULLETIN No. 181 SULPHATE OF MAGNESIA (EPSOM SALTS).

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Results of Analysis, Arsenic per 100 Grams.	No. of Sample.
				Quantity	Cents.				
DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.									
1909.									
April 15	Sulphate of Magnesia (Epsom Salts).	33927	A. H. Buckley, Halifax, N.S.	$\frac{1}{2}$ lb.	5	National Drug and Chemical Co., Halifax, N.S.	.....	None	33927
" 16	"	33928	J. R. Rawley, Halifax, N.S.	$\frac{1}{2}$ " "	5	"	.....	"	33928
" 16	"	33929	A. A. Thompson, Halifax, N.S.	$\frac{1}{2}$ " "	5	"	.....	"	33929
" 16	"	33930	M. D. Logan, Halifax, N.S.	$\frac{1}{2}$ " "	5	"	.....	"	33930
" 17	"	33931	Nat. Drug and Chem. Co., Halifax, N.S.	$\frac{1}{2}$ " "	5	Vendors.	.....	"	33931
" 17	"	33932	T. M. Power & Son, Halifax, N.S.	$\frac{1}{2}$ " "	5	National Drug and Chemical Co., Halifax, N.S.	.....	"	33932
" 19	"	33933	L. C. Gardner, Yarmouth, N.S.	$\frac{1}{2}$ " "	5	Can. Drug Co., St. John, N.B.	.....	"	33933
" 20	"	33934	J. D. Clarke, Kentville, N.S.	$\frac{1}{2}$ " "	5	National Drug and Chemical Co., Halifax, N.S.	.....	"	33934
" 22	"	33935	A. E. Smith, Truro, N.S.	$\frac{1}{2}$ " "	5	Unknown	.....	"	33935
" 23	"	33936	J. McD. Taylor, Halifax, N.S.	$\frac{1}{2}$ " "	5	National Drug and Chemical	.....	"	33936
DISTRICT OF PRINCE EDWARD ISLAND—THEO. MOORE, INSPECTOR.									
1909.									
April 7	Sulphate of Magnesia (Epsom Salts).	31488	John F. McNeill, Summerside.	$\frac{1}{2}$ lb.	5	National Drug and Chemical Co., Halifax, N.S.	.....	None	31488
" 7	"	31489	McFadyen & McLellan, Summerside.	$\frac{1}{2}$ " "	5	Can. Drug Co., St. John, N.B.	.....	"	31489
" 8	"	31490	Sinclair & Stewart, Summerside.	$\frac{1}{2}$ " "	5	L. Chaput, Fils & Co, Montreal.	.....	"	31490
" 8	"	31491	Jardine & Bernard, Kensington.	$\frac{1}{2}$ " "	5	Can. Drug Co., Halifax	.....	"	31491
" 12	"	31492	W. H. Pigott, Mount Stewart.	$\frac{1}{2}$ " "	5	Carnell Bros., Charlottetown.	.....	"	31492



"	13	"	"	31493	Mrs. D. Gordon, George- town.	6 Northrop & Lyman Co., Ltd., Toronto.	"	31493
"	15	"	"	31494	Johnson & Johnson, Charlottetown.	5 Lyman & Son, Montreal.	"	31494
"	15	"	"	31495	C. D. Rankin, Charlotte- town.	5 " "	"	31495
"	15	"	"	31496	J. G. Jamieson, Char- lottetown.	5 " "	"	31496
"	15	"	"	31497	M. Duffy & Son, Char- lottetown.	8 Nicholson & Brock, Toronto.	"	31497

14—3

DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON, INSPECTOR.

Mar.	24	Sulphate of Magnesia (Epsom Salts).	29922	Burpee E. Brown, St. John, N.B.	15 National Drug and Chemical Co., Ltd., St. John, N.B.	Less than 1 milligram....	29922
"	25	"	29923	R. H. Robb, St. John, N.B.	5 " "	None.....	29923
April	6	"	29924	Chas. A. Burchill, Fred- erickton, N.B.	5 " "	Less than ½ milligram....	29924
"	6	"	29925	Hunt & McDonald, Frederickton, N.B.	10 " "	" ½ " "	29925
"	7	"	29926	C. A. McKee, Wood- stock, N.B.	5 Can. Drug Co., St. John, N.B.	" 1 " "	29926
"	14	"	29927	D. J. Sharp, Sussex, N.B.	5 National Drug and Chemical Co., St. John, N.B.	None.....	29927
"	15	"	29928	Francis McKay, Mon- ton, N.B.	5 F. G. Reid & Co., Moncton, N.B.	"	29928
"	17	"	29930	A. Chipman Smith & Co., Bathurst, N.B.	5 Vendors.....	"	29930
"	19	"	29931	A. McG. McDonald, 3pkgs. Campbellton, N.B.	15 Howard & Sons, London, Eng.	"	29931
"	15	"	29939	G. O. Spencer, Moncton, N.B.	5 Can. Drug Co., St. John, N.B.	Less than ½ milligram....	29939

DISTRICT OF QUEBEC—E. BELAND, INSPECTOR.

April	20	Sulphate of Magnesia (Epsom Salts).	36701	V. Giroux, Quebec	5 Lyman's Ltd., Montreal	None.....	36701
"	20	"	36702	Laroche & Co., Quebec	5 Lyman & Sons, Montreal.	"	36702
"	20	"	36703	R. B. Roger, Quebec.	15 Nat. Drug Co., Montreal.	"	36703
"	20	"	36704	H. Wellis, Quebec	15 Unknown.....	"	36704
"	20	"	36705	T. E. Dubé, Quebec.....	10 " "	"	36705
"	21	"	36706	A. L. Jolicœur, Quebec.	10 Lyman & Sons, Montreal.	"	36706
"	21	"	36707	F. E. Gauvreau & Frères, Quebec.	10 " "	"	36707
"	20	"	36898	W. Brunnette & Cie, Quebec.	5 Unknown.....	"	36898
"	20	"	36899	L. E. Martel, Quebec.....	5 Langlois & Paradis, Quebec.	"	36899
"	20	"	36900	D. R. Gagnon, Quebec.....	10 Lyman Knox, Montreal	"	36900



Date of Collection.	Nature of Sample.	No. of Sample.	Name and address of Vendor.	Cost.		Inspector's Report. (Is not an expression of opinion.)	Results of Analysis, Arsenic per 100 Grams.	No. of Sample.
				Quantity	Cents.			

1909. DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

April 21	Sulphate of Magnesia (Epsom Salts).	1034	G. P. Sabourin, St. Jean	1 lb.	8	Lymans Ltd., Montreal	None	1034
" 27	"	1035	Dr. Mignault, Actonville	1 "	5	Unknown	"	1035
" 29	"	1036	Dr. Belleau, Arthabaska	1 "	8	Pharmacie Brunet, Quebec	"	1036
May 5	"	1037	Pharmacie Chagnon	1 "	5	Lymans Ltd., Montreal	"	1037
" 5	"	1038	W. J. H. McKindsey, Sherbrooke	1 "	10	Lymans Ltd., Montreal	"	1038
" 11	"	1039	Dr. Gelinas, St. Guil-	1 "	7	Laporte, Martin & Co., Montreal	"	1039
" 18	"	1040	Dr. Sylvestre, Sorel	1 "	5	National Drug Co., Montreal	"	1040
" 25	"	1041	Dr. J. A. Viger, St. Hyacinthe	1 "	5	Lymans Ltd., Montreal	"	1041
" 25	"	1042	Phar. Brodeur, St. Hyacinthe	1 "	5	National Drug Co., Montreal	"	1042
" 25	"	1043	C. H. Welch, Waterloo	1 "	5	Unknown	"	1043

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

April 19	Sulphate of Magnesia (Epsom Salts).	40061	J. A. Godbout, 278 Craig St., Montreal	1 lb.	8	Lymans Ltd.	Less than 1/4 milligram	40061
" 19	"	40062	Arthur Maillet, 621 Craig St., Montreal	1 "	5	Unknown	None	40062
" 19	"	40063	A. E. Gravelle, 542 St. Catherine, Montreal	1 "	5	"	"	40063
" 23	"	40064	Dr. J. E. St. Onge, Valleyfield, P.Q.	1 "	5	Lymans Ltd.	"	40064
" 23	"	40065	A. D. Munn, 201 St. Antoine St., Montreal	1 "	5	"	Less than 1/4 milligram	40065
" 26	"	40066	A. L. Boucher, Joliette	1 "	5	"	None	40066







BULLETIN No. 181—SULPHATE OF MAGNESIA (EPSOM SALTS.)

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Inspector's Report. (Is not an expression of opinion.)	Results of Analysis, Arsenic per 100 Grams.	No. of Sample.
				Quantity.	Cents.			
DISTRICT OF TORONTO—H. J. DAGGER, INSPECTOR.								
April 7	Sulphate of Magnesia (Epsom Salts).	36226	Chas. T. Laird, Hamilton	$\frac{1}{2}$ lb.	5	J. Winer & Co., Hamilton.	Less than $\frac{1}{2}$ milligram.	36226
" 8	"	36227	R. A. Smith, Newmarket.	$\frac{1}{2}$ " "	5	Unknown	None.	36227
" 13	"	36228	Wm. Crossland, Barrie.	$\frac{1}{2}$ " "	5	Drug Trading Co., Toronto.	"	36228
" 14	"	36229	Golding Co., Tottenham.	$\frac{1}{2}$ " "	5	Nat. Drug and Chemical Co., Ltd., Toronto.	"	36229
" 16	"	36230	G. A. Ramsden, Georgetown.	$\frac{1}{2}$ " "	5	" " "	"	36230
" 17	"	36231	Geo. Marshall & Co., Toronto.	$\frac{1}{2}$ " "	5	The Drug Trading Co., Ltd., Toronto.	"	36231
" 17	"	36232	J. A. Thompson, Toronto.	$\frac{1}{2}$ " "	5	Vendor.	"	36232
" 17	"	36233	W. J. Mitchell, Toronto.	$\frac{1}{2}$ " "	5	Drug Trading Co., Ltd., Toronto.	"	36233
" 19	"	36234	W. H. Summerfeldt, Toronto.	$\frac{1}{2}$ " "	5	" " " " "Howards"	"	36234
" 19	"	36235	W. M. Maltby, Toronto.	$\frac{1}{2}$ " "	5	Lyman Bros. & Co., Ltd., Toronto.	"	36235

DISTRICT OF LONDON—T. KIDD, INSPECTOR.

Mar. 29	Sulphate of Magnesia (Epsom Salts).	30605	Chas. Aberhart, Seaforth	$\frac{1}{2}$ lb.	5	Lyman Bros., Toronto.	None.	30605
" 29	"	30606	W. A. McConnell, Clinton.	1 " "	10	National Drug Co., London, Ont.	Less than $\frac{1}{2}$ milligram.	30606
" 31	"	30612	J. J. McEwin, Goderich	$\frac{1}{2}$ " "	5	Elliot, Mar & Co., London, Ont.	None.	30612
April 7	"	30631	W. A. McIntyre, St. Mary's.	$\frac{1}{2}$ " "	11	National Drug Co., London, Ont.	Less than $\frac{1}{2}$ milligram.	30631
" 7	"	30633	Frank H. Smith, St. Mary's.	$\frac{1}{2}$ " "	5	Lyman Bros., Toronto, Ont.	None.	30633
" 7	"	30634	J. McClean, St. Mary's.	$\frac{1}{2}$ " "	5	"	"	30634



SESSIONAL PAPER No. 14

"	7	"	"	30636	W. R. Burcher	"	3	4	Gorman Eckert, London	"	30636
"	7	"	"	30637	A. Beattie & Co.,	"	3	4	Unknown	"	30637
"	7	"	"	30638	G. P. McCartney, Stratford.	"	4	4	Kerry, Watson & Co., London, Ont.	"	30638
"	7	"	"	30639	J. J. Doyle, Stratford.	"	3	5	Unknown	Less than 1/2 milligram	30639

DISTRICT OF WINDSOR JNO. TALBOT, INSPECTOR.

April	8	Sulphate of Magnesia (Epsom Salts).	"	34780	N. W. Emerson, London, Ont.	1 lb.	5	5	National Drug Co.	None	34780
"	8	"	"	34783	Callard & McLachlan, London, Ont.	1/2 "	10	10	Unknown	"	34783
"	8	"	"	34788	A. J. Ormond, London, Ont.	1/2 "	8	8	National Drug Co.	Less than 1/2 milligram	34788
"	10	"	"	34792	Bruce Wallace, London, Ont.	1/2 "	10	10	"	"	34792
"	14	"	"	34795	H. J. Foster, St. Thomas	1/2 "	5	5	"	None	34795
"	14	"	"	34798	Fred W. Judd	1/2 "	5	5	"	Less than 1/2 milligram	34798
"	15	"	"	35905	R. L. Cowan, Strathroy.	1/2 "	5	5	Gorman Eckert Co., London, Ont.	None	35905
"	15	"	"	35906	D. Graham	1/2 "	5	5	A. M. Smith & Co., London, Ont.	"	35906
1	15	"	"	35907	Jas. Noble	1/2 "	5	5	Todhunter & Mitchell, Toronto.	"	35907
"	16	"	"	35912	J. E. Roome, Glencoe.	1/2 "	5	5	Unknown	"	35912

DISTRICT OF MANITOBA—A. C. LARIVIERE, INSPECTOR.

April	19	Sulphate of Magnesia (Epsom Salts).	"	35836	Sherrin & Co., Carberry.	1 lb.	5	5	The Bole Drug Co., Winnipeg.	None	35836
"	20	"	"	35837	Dunkin's Drug Store, Portage la Prairie.	1/2 "	5	5	Lyman Sons, Montreal.	"	35837
"	21	"	"	35838	A. M. Sutherland, Elmwood P.O., Winnipeg.	1/2 "	5	5	Unknown	"	35838
"	23	"	"	35839	Pulford Drug Store, Carleton Place.	1/2 "	5	5	"	"	35839
"	23	"	"	35840	Sanders Drug Store, Carleton Place.	1/2 "	5	5	Martin, Pole, Wynne Co., Winnipeg.	"	35840
"	24	"	"	34841	Elm Creek Drug Store, Elm Creek.	1/2 "	5	5	"	"	35841
"	26	"	"	35842	Cowan & Hays, Deloraine.	1/2 "	5	5	Unknown	"	35842
"	26	"	"	35843	C. E. Hasselfield, Deloraine.	1/2 "	5	5	Lynan Bros., Toronto.	"	35843
"	27	"	"	35844	Napinka Drug Hall, Napinka.	1/2 "	5	5	Unknown	"	35844
"	29	"	"	35845	The Clarendon Pharmacy, Winnipeg.	1/2 "	10	10	The Bole Drug Co., Winnipeg.	"	35845



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Result of Analysis, Arsenic per 100 Grams.	No. of Sample.
				Quantity	Cents				

DISTRICT OF CALGARY—R. W. FLETCHER, INSPECTOR.

April 27	Sulphate of Magnesia (Epsom Salts).	35501	G. M. Cawker, Medicine Hat.	$\frac{1}{2}$ lb.	10	Lyman Sons & Co., Montreal	.....	None	35501
" 27	"	35502	C. S. Pringle, Medicine Hat.	$\frac{1}{2}$ "	10	Lyman Sons & Co., Montreal	.....	"	35502
" 27	"	35503	B. F. Souch, Medicine Hat.	$\frac{1}{2}$ "	10	Nat. Drug & Chemical Co., Winnipeg.	.....	"	35503
" 29	"	35504	G. H. Graydon, Edmonton.	$\frac{1}{2}$ "	15	Howard & Son., London, Eng.	.....	"	35504
" 29	"	35505	T. G. Carson, Edmonton.	$\frac{1}{2}$ "	10	Martin Bole & Wynne.....	.....	"	35505
" 29	"	35506	A. Archibald, Edmonton.	$\frac{1}{2}$ "	10	Lyman Sons & Co., Montreal	.....	"	35506
" 29	"	35507	Algonquin Pharmacy, Edmonton	$\frac{1}{2}$ "	35	A. Macdonald & Co., Edmonton.....	.....	"	35507
" 29	"	35508	Edmonton Drug Co., Edmonton.	$\frac{1}{2}$ "	10	Lyman Sons & Co., Montreal	.....	"	35508
" 29	"	35510	J. H. Lives, Edmonton.	$\frac{1}{2}$ "	10	Unknown.....	.....	"	35510
" 29	"	35531	E. M. Carpenter Edmonton.	$\frac{1}{2}$ "	10	Bole Drug Co., Calgary.....	.....	"	35531

DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR.

March 6	Sulphate of Magnesia (Epsom Salts).	37604	M. S. MacDowell, North Vancouver.	$\frac{1}{2}$ lb.	25	Henderson Bros., Vancouver	.....	Less than $\frac{1}{2}$ milligram	37604
" 6	"	37605	Marrett & Reid, Hastings St., Vancouver.	$\frac{1}{2}$ "	10	"	.....	" $\frac{1}{2}$ "	37605
" 6	"	37606	Marrett & Reid, Arcade St., Vancouver.	$\frac{1}{2}$ "	25	"	.....	None	37606
" 6	"	37607	E. S. Knowlton, Vancouver.	$\frac{1}{2}$ "	10	"	.....	Less than $\frac{1}{2}$ milligram	37607
" 6	"	37608	Central Drug Store, Vancouver.	$\frac{1}{2}$ "	10	"	.....	" " "	37608



## SESSIONAL PAPER No. 14

"	25	"	"	37609 Owl Drug Store, Van-	15	"	"	"	37609
"	25	"	"	cover 37610 McDuffee Bros., & Co., Vancouver.	10	"	"	None	37610
"	25	"	"	37611 R. G. Wood, Vancouver.	15	"	"	"	37611
"	27	"	"	37612 L. G. Henderson, Van-	20	"	"	Less than 1 milligram	37612
"	27	"	"	cover. 37613 Red Cross Drug Store, Vancouver.	10	"	"	" $\frac{1}{2}$	37613

## DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

May	11	Sulphate of Magnesia (Epsom Salts).	39331 F. J. Williams, Victoria, B.C.	15	Henderson Bros., Victoria, B.C.	None	39331
"	11	"	39332 Dean & Hiscocks, Vic-	5	"	"	39332
"	11	"	toria, B.C. 39333 Wm. Jackson & Co., Vic-	15	"	"	39333
"	12	"	toria, B.C. 39334 D. E. Campbell, Victor-	10	"	"	39334
"	12	"	ia, B.C. 39335 W. S. Terry, Victoria, B.C.	10	"	"	39335
"	13	"	39336 John Cochrane, Victoria, B.C.	10	"	"	39336
"	13	"	39337 Cyrus H. Bower, Victor-	10	"	"	39337
"	13	"	ia, B.C. 39338 Geo. A. Fraser, Victoria, B.C.	10	"	"	39338
"	13	"	39339 B. C. Drug Co., Victoria, B.C.	10	"	"	39339
"	13	"	39340 Thos. Shotbolt, Victoria, B.C.	10	Baiss Bros & Stephenson, London, Eng.	"	39340



BULLETIN No. 181—SULPHATE OF SODA (GLAUBER'S SALT).

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Inspector's Report. (Is not an expression of opinion.)	Result of Analysis, Arsenic per 100 Grams.	No. of Sample.
				Quantity.	Cents.			

DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.

1909.

April 16	Sulphate of Soda (Glauber's Salt).	33942	G. A. Burbidge, Halifax, N.S.	15	Nat. Drug and Chem. Co., Halifax, N.S.	Less than 1 milligram...	33942
" 17	"	33943	Nat. Drug and Chem. Co., Halifax, N.S.	5	Nat. Drug and Chem. Co., Montreal.	None.	33943
" 17	"	33944	C. A. Munford, Halifax, N.S.	10	Nat. Drug and Chem. Co., Halifax.	"	33944
" 19	"	33945	B. F. Trask, Yarmouth, N.S.	5	Can. Drug Co., St. John, N.B.	"	33945
" 20	"	33946	G. C. McDougall, Kentville, N.S.	5	Unknown.	"	33946
" 22	"	33947	Hub Drug Store, Truro, N.S.	5	Nat. Drug and Chem. Co., Halifax.	"	33947
" 22	"	33948	Crowe Bros., Truro, N.S.	5	"	"	33948
" 22	"	33949	Truro Drug Co., Truro, N.S.	10	"	"	33949
" 23	"	33950	E. J. Butler, Dartmouth, N.S.	5	"	"	33950
" 23	"	33951	M. P. McCaffrey, Halifax, N.S.	10	"	"	33951

DISTRICT OF PRINCE EDWARD ISLAND—THEO. MOORE, INSPECTOR.

April 7	Sulphate of Soda (Glauber's Salt).	38501	John T. McNeill, Summerside.	6	Nat. Drug Co., Halifax	None.	38501
" 7	"	38502	P. N. Enman, Summerside.	10	"	Less than 1 milligram...	38502
" 7	"	38503	McFadyen & McLellan, Summerside.	10	Can. Drug Co., St. John.	None.	38503
" 8	"	38504	Jardine & Bernard, Kensington.	8	Nat. Drug Co., Halifax	"	38504
" 12	"	38505	John Knight, Georgetown.	5	"	Less than 1 milligram...	38505



SESSIONAL PAPER No. 14

"	15	"	"	38506	A. W. Reddin, Charlottetown.	Char- $\frac{1}{2}$ lb.	10	"	"	.....	Contains 5.3 milligrams.	38506
"	"	"	"	38507	G. E. Hughes, Charlottetown.	Charlotte- $\frac{1}{2}$ lb.	5	Lynan Sons & Co., Montreal.	.....	None.	.....	38507
"	15	"	"	38508	McDonald & McKinnon, Charlottetown.	Charlotte- $\frac{1}{2}$ lb.	15	Lymans Ltd., Montreal.	.....	"	.....	38508
"	15	"	"	38509	Redlin Bros., Charlottetown.	Charlotte- $\frac{1}{2}$ lb.	8	Lynan Sons & Co., Montreal.	.....	Less than $\frac{1}{2}$ milligram.	.....	38509
"	15	"	"	38510	Gillis & Sons, Charlottetown.	Charlotte- $\frac{1}{2}$ lb.	5	Nat. Drug Co., Halifax.	.....	None.	.....	38510

DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON, INSPECTOR.

Mar.	25	Sulphate of Soda (Glauber's Salt).	"	29932	George P. Allen, N.B.	St. $\frac{1}{2}$ lb.	10	Unknown.	.....	None.	.....	29932
"	26	"	"	29933	Frank E. Porter, N.B.	St. $\frac{1}{2}$ lb.	5	The Nat. Drug and Chem. Co., Ltd., St. John, N.B.	.....	Contains 3.2 milligrams.	.....	29933
April	6	"	"	29934	C. Fred. Chesnut, N.B.	Fred- $\frac{1}{2}$ lb.	6	Unknown.	.....	Less than $\frac{1}{2}$ milligram.	.....	29934
"	7	"	"	29935	The Baird Co., N.B.	Ltd., $\frac{1}{2}$ lb.	6	Lymans Ltd., Montreal.	.....	Less than 1 milligram.	.....	29935
"	7	"	"	29936	D. W. C. Stevens, N.B.	Wood- $\frac{1}{2}$ lb.	10	The Can. Drug Co., St. John, N.B.	.....	Less than $\frac{1}{2}$ milligram.	.....	29936
"	14	"	"	29937	G. M. Fairweather, N.B.	Sus- $\frac{1}{2}$ lb.	5	The Nat. Drug Co., Halifax, N.S.	.....	None.	.....	29937
"	15	"	"	29938	Dr. O. E. Steeves, N.B.	Mon- $\frac{1}{2}$ lb.	5	The Can. Drug Co., St. John, N.B.	.....	"	.....	29938
"	15	"	"	29939	J. McD. Cooke, N.B.	Mon- $\frac{1}{2}$ lb.	5	The Nat. Drug Co., St. John, N.B.	.....	Less than $\frac{1}{2}$ milligram.	.....	29939
"	16	"	"	29941	A. E. Shaw, N.B.	Newcastle, $\frac{1}{2}$ lb.	5	The Can. Drug Co., St. John, N.B.	.....	None.	.....	29941
"	19	"	"	29953	John White, N.B.	Campbell- $\frac{1}{2}$ lb.	5	The Nat. Drug Co., St. John, N.B.	.....	Less than $\frac{1}{2}$ milligram.	.....	29953

DISTRICT OF QUEBEC E. BELAND, INSPECTOR.

April	20	Sulphate of Soda (Glauber's Salt).	"	36708	W. Brunette & Cie, Quebec.	Que- $\frac{1}{2}$ lb.	10	Howard's, England.	.....	None.	.....	36708
"	20	"	"	36709	L. E. Martel, Quebec.	Que- $\frac{1}{2}$ lb.	5	Lynans Ltd., Montreal.	.....	Less than $\frac{1}{2}$ milligram.	.....	36709
"	20	"	"	36710	D. R. Gagnon, Quebec.	Que- $\frac{1}{2}$ lb.	10	Lynan Knox, Montreal.	.....	None.	.....	36710
"	20	"	"	36711	V. Giroux, Quebec.	Que- $\frac{1}{2}$ lb.	5	"	.....	Less than $\frac{1}{2}$ milligram.	.....	36711
"	20	"	"	36712	Laroche & Co., Quebec.	Que- $\frac{1}{2}$ lb.	10	Lynan & Son, Montreal.	.....	None.	.....	36712
"	20	"	"	36713	R. B. Roger, Quebec.	Que- $\frac{1}{2}$ lb.	50	Merck, Germany.	.....	"	.....	36713
"	20	"	"	36714	H. Wellis, Quebec.	Que- $\frac{1}{2}$ lb.	35	Nat. Drug Co., Montreal.	.....	"	.....	36714
"	20	"	"	36715	T. E. Dubé, Quebec.	Que- $\frac{1}{2}$ lb.	45	Merck, Germany.	.....	Less than $\frac{1}{2}$ milligram.	.....	36715
"	21	"	"	36716	A. L. Jolicoeur, Quebec.	Que- $\frac{1}{2}$ lb.	20	Unknown.	.....	Less than 1 milligram.	.....	36716
"	21	"	"	36717	F. E. Gauvreau, Quebec.	Que- $\frac{1}{2}$ lb.	45	Lynan & Son, Montreal.	.....	"	.....	36717



BULLETIN No. 181—SULPHATE OF SODA (GLAUBER'S SALT.)

1 GEORGE V., A. 1911

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Results of Analysis, Arsenic per 100 Grams.	No. of Sample.
				Quantity.	Cents.				

1909. DISTRICT OF ST. HYACINTHE, J. C. ROULEAU, INSPECTOR.

Apr. 23	Sulphate of Soda (Glauber's Salt.)	1045	Dr. W. Lord, Granby	$\frac{1}{2}$ lb.	5	Unknown	.....	None	1045
" 29	"	1046	J. C. Sutherland, Richmond.	$\frac{1}{2}$ " "	5	Lymans Ltd., Montreal	.....	"	1046
" 29	"	1048	Pharmacie Missicotte, Victoriaville.	$\frac{1}{2}$ " "	5	Unknown	.....	"	1048
May 6	"	1049	J. F. Flint, Rock Island.	$\frac{1}{2}$ " "	25	"	.....	"	1049
" 11	"	1050	Dr. J. A. Gelinac, St. Guillaume.	$\frac{1}{2}$ " "	13	Chapman & Dart, Montreal	.....	"	1050
" 18	"	1051	Dr. Sylvestre, Sorel	$\frac{1}{2}$ " "	10	W. M. Evans & Co., Montreal	.....	"	1051
" 25	"	1052	Dr. J. A. Viger, St. Hyacinthe.	$\frac{1}{2}$ " "	5	Lymans Ltd., Montreal	.....	"	1052
" 25	"	1053	Pharmacie St. Jacques, St. Hyacinthe.	$\frac{1}{2}$ " "	5	"	.....	"	1053
" 26	"	1054	Dr. Comeau, Farnham	$\frac{1}{2}$ " "	10	"	.....	"	1054

DISTRICT OF MONTREAL, J. J. COSTIGAN, INSPECTOR.

Apr. 19	Sulphate of Soda (Glauber's Salt.)	40071	J. A. Godbout, 278 Craig St., Montreal.	$\frac{1}{2}$ lb.	7	Lymans Ltd.	.....	None	40071
" 19	"	40072	Arthur Maillet, 621 Craig St., Montreal.	$\frac{1}{2}$ " "	5	Unknown	.....	"	40072
" 23	"	40073	A. D. Munn, 291 St. Antoine St., Montreal.	$\frac{1}{2}$ " "	15	.....	Mereks	"	40073
" 23	"	40074	Queneville & Guérin, 397 St. Antoine St., Montreal.	$\frac{1}{2}$ " "	10	.....	.....	Less than 1 milligram	40074
" 26	"	40075	A. L. Boucher, Joliette, P.Q.	$\frac{1}{2}$ " "	25	Nat. Drug and Chem. Co., Montreal.	.....	None	40075



SESSIONAL PAPER No. 14

"	25	"	"	"	40076 J. T. Gaudet, Joliette, P.Q.	10	.....	.....	.....	40076
May	4	"	"	"	40077 John T. Lyons Co., Ltd., Montreal.	10	.....	.....	.....	40077
"	4	"	"	"	40078 Leo. G. Ryan, Montreal.	5	Howard's	.....	.....	40078
"	4	"	"	"	40079 J. H. Nault, Montreal.	10	"	.....	Less than 1 milligram	40079
"	4	"	"	"	40080 E. Ethier, Montreal.	5	"	.....	None	40080

DISTRICT OF OTTAWA, J. A. RICEY, INSPECTOR.

Mar.	19	Sulphate of Soda (Glauber's Salt.)	"	"	22951 F. W. Warwick, Buckingham.	5	Unknown.	.....	.....	Less than 1 milligram	22951
"	19	"	"	"	22952 Dr. Wallace, Buckingham.	5	Lyman Sons & Co., Montreal.	.....	.....	None	22952
"	22	"	"	"	22953 Dr. A. Lyon, Shawville.	5	Lyman's Ltd., Montreal.	.....	.....	"	22953
"	23	"	"	"	22954 Jas. Clark, Renfrew.	5	"	.....	.....	Less than 1 milligram	22954
"	23	"	"	"	22955 J. M. Plaunt Ltd., Renfrew.	5	Unknown.	.....	.....	"	22955
"	24	"	"	"	22956 Jos. Valiquette Co., Ltd., cor. York and Dalhousie Sts., Ottawa.	5	Ottawa Drug Co., Ottawa.	.....	.....	Contains 7.9	22956
"	24	"	"	"	22957 Thos. Payment, Ottawa.	5	"	.....	.....	Less than 1	22957
"	26	"	"	"	22958 E. D. Story, Ottawa.	10	Unknown.	.....	.....	"	22958
"	26	"	"	"	22959 E. R. DesRosiers, Ottawa.	5	Ottawa Drug Co., Ottawa.	.....	.....	None	22959
"	26	"	"	"	22960 Estate of W. H. Roger,	10	Unknown.	.....	.....	Less than 1 milligram	22960

DISTRICT OF KINGSTON, JAS. HOGAN, INSPECTOR.

Mar.	17	Sulphate of Soda (Glauber's Salt.)	"	"	39481 H. Skinner, Kingston.	2	Nat. Drug Co.	.....	.....	Less than 1 milligram	39481
"	17	"	"	"	39482 W. W. Gibson, Kingston.	5	"	.....	.....	Less than 1	39482
"	22	"	"	"	39483 E. C. Clarke, Belleville.	5	Unknown.	.....	.....	None	39483
"	22	"	"	"	39484 R. Templeton, Belleville.	5	Nat. Drug Co.	.....	.....	"	39484
"	22	"	"	"	39485 A. J. Gould, Cobourg.	3	Lyman Bros., Toronto.	.....	.....	"	39485
"	22	"	"	"	39486 O. S. Johns, Cobourg.	5	Nat. Drug Co.	.....	.....	"	39486
"	23	"	"	"	39487 McDermaid & Peterboro'.	5	Lyman Bros., Toronto.	.....	.....	Less than 1 milligram	39487
"	23	"	"	"	39488 L. A. Payne, Peterboro'.	3	Drug Trading Co., Toronto.	.....	.....	"	39488
"	23	"	"	"	39489 J. D. Tully, Peterboro'.	5	Unknown.	.....	.....	None	39489
"	23	"	"	"	39490 Nugent Drug Co., Peterboro'.	5	Lyman Bros., Toronto.	.....	.....	Less than 1 milligram	39490



BULLETIN No. 181—SULPHATE OF SODA (GLAUBER'S SALT).

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspectors' Report. (Is not an expression of opinion.)	Results of Analysis, Arsenic per 100 Grams.	No. of Samples.
				£	Cents				

DISTRICT OF TORONTO H. J. DAGGER—INSPECTOR.

1909.

April 7	Sulphate of Soda (Glaubers Salt)	36236	H. Spencer Case, Hamilton.	10	lb.	Dom. Drug Co., Hamilton.	.....	Less than 1/2 milligram....	36236
" 8	"	36237	Rutherford & Co., Aurora	5	"	National Drug & Chem. Co., Toronto.	.....	" "	36237
" 8	"	36238	Norman L. Rogers Co., Ltd., Newmarket.	3	"	" "	.....	None.....	36238
" 12	"	36239	W. L. Campbell, Bradford.	2	"	Unknown.....	.....	"	36239
" 13	"	36240	D. H. McLaren, Barrie.	5	"	National Drug and Chem. Co., Hamilton.	.....	"	36240
" 14	"	36241	J. B. Hipwell, Alliston.	2	"	Drug Trading Co., Toronto.	.....	Less than 1/2 milligram....	36241
" 14	"	36242	Dr. Jos. Campbell, Tottenham.	3	"	Shuttleworth Chemical Co., Ltd., Toronto.	.....	None.....	36242
" 16	"	36243	Edward J. Scott, Georgetown.	3	"	J. Winer & Co., Ltd., Hamilton.	.....	"	36243
" 17	"	36244	A. D. Jupp, Toronto.	5	"	Lynman Bros. & Co., Toronto	.....	"	36244
" 19	"	36245	City Hall Drug Store, (F. J. Carly, Mgr.), Toronto	3	"	Drug Trading Co., Toronto.	.....	"	36245

DISTRICT OF LONDON—T. KIDD, INSPECTOR.

Mar. 25	Sulphate of Soda (Glaubers Salt)	30592	A. B. Petrie, Guelph.	5	"	McArthur & Connell, Montreal.	.....	Less than 1/2 milligram	30592
" 31	"	30613	H. C. Dunlop, Goderich.	5	"	Unknown.....	.....	"	30613
April 1	"	30622	F. H. Walleys, Wingham.	5	"	National Drug Co., Toronto.	.....	None.....	30622
" 2	"	30629	J. Livingston, Listowel.	5	"	" "	.....	"	30629
" 7	"	30630	W. A. McIntyre, St. Mary's.	11	"	Nat. Drug. Co., London, Ont.	.....	"	30630
" 7	"	30632	Frank H. Smith, St. Mary's.	5	"	Lynman Bros., Toronto....	.....	"	30632
" 7	"	30635	J. McLeans, St. Mary's.	5	"	" "	.....	"	30635
" 7	"	30640	George J. Waugh, Stratford.	5	"	" "	.....	Less than 1/2 milligram....	30640



SESSIONAL PAPER No. 14

"	"	"	"	30641	W. B. Barlay, Mitchell, Ont.	5 Unknown	.....	None	30641
"	"	"	"	30642	S. A. Hodge, Mitchell, Ont.	5 Nat. Drug Co., London, Ont.	.....	"	30642

DISTRICT OF WINDSOR J. TALBOT, INSPECTOR.

April	8	Sulphate of Soda (Glaucobers Salt)	"	34781	B. A. Mitchell, London, Ont.	5 Nat. Drug Co.	.....	None	34781
"	8	"	"	34786	Meek & Vinning, London, Ont.	5	.....	"	34786
"	8	"	"	34791	E. W. Boyle, London East, Ont.	10	.....	"	34791
"	10	"	"	34794	C. E. Perry, London, Ont.	10	.....	"	34794
"	14	"	"	34796	E. P. Reynolds, St. Thomas.	5	.....	"	34796
"	14	"	"	35902	F. A. Lemon & Co., St. Thomas.	5	Drug Trading Co., Toronto.	"	35902
"	15	"	"	35909	H. W. Thompson, Strathroy.	15	Unknown	"	35909
"	15	"	"	35910	M. Maude Orchard, Strathroy.	5	Nat. Drug Co., London, Ont.	Less than ½ milligram	35910
"	16	"	"	35914	McFarlane & Co., Glenora, Ont.	5	"	None	35914
"	16	"	"	35915	L. Waldren, South, Ont.	5	"	Less than ½ Milligram	35915
"	16	"	"	35916	Wm Robinson, South, Ont.	5	"	None	35916

DISTRICT OF MANITOBA A. C. LARIVIERE, INSPECTOR.

April	14	Sulphate of Soda (Glaucobers Salt)	"	35846	D. A. Fraser & Co., Winnipeg.	5 Unknown	.....	None	35846
"	15	"	"	35847	J. R. Robinson, Winnipeg.	20	Mallinckrodt Chem. Works, St. Louis & New York.	Less than ½ milligram	35847
"	15	"	"	35848	Coleough & Co., Winnipeg.	35	Unknown	None	35848
"	16	"	"	35849	G. E. Rogers, Winnipeg.	20	Nat. Drug. and Chem. Co., Montreal.	"	35849
"	14	"	"	35850	F. P. Seale, Winnipeg.	10	Martin, Bole, Wynne & Co., Winnipeg.	"	35850
"	19	"	"	35851	Dr. J. M. Eaton & Co., Carberry.	5	The Bole Drug Co., Winnipeg.	"	35851
"	20	"	"	35852	Cowan's Drug Store, Portage La Prairie.	5	Unknown	"	35852
"	20	"	"	35853	B. M. Canniff, Portage La Prairie.	5	The Bole Drug Co., Winnipeg.	"	35853
"	20	"	"	35854	J. R. Hill, Portage La Prairie.	5	The Martin, Bole & Wynne Co., Winnipeg.	"	35854
"	21	"	"	35855	Elmwood Drug Store, Elmwood, P.O., Winnipeg.	5	Unknown	"	35855



BULLETIN No. 181- SULPHATE OF SODA (GLAUBER'S SALT).

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Results of Analysis, Arsenic per 100 Grams.	No. of Sample.
				Quantity.	Cents.				
DISTRICT OF CALGARY R. W. FLETCHER, INSPECTOR.									
1909.									
April 27	Sulphate of Soda (Glauber's Salt)	35511	C. S. Pringle, Medicine Hat.	10 lb.	10	Lyman Sons & Co., Montreal.	.....	Less than 1 milligram....	35511
" 29	"	35512	G. H. Graydon, Edmonton.	10 "	25	E. Merck, Darmstadt, Ger.	.....	None .....	35512
" 29	"	35513	T. G. Carson, Edmonton.	10 "	10	Bole Drug Co., Calgary.	.....	Less than 1 milligram....	35513
" 29	"	35514	A. Archibald, Edmonton.	10 "	10	Lyman Sons & Co., Montreal.	.....	None .....	35514
" 29	"	35515	Algonquin Pharmacy, Edmonton.	10 "	35	Unknown .....	.....	" .....	35515
" 29	"	35516	Edmonton Drug Co., Edmonton.	10 "	15	Unknown .....	.....	" .....	35516
" 29	"	35517	J. H. Lives, Edmonton.	10 "	15	Mallinckrodt Chem. Works, Germany.	.....	" .....	35517
" 29	"	35518	Macdonald's Pharmacy, Edmonton.	10 "	10	Lyman Sons & Co., Montreal.	.....	Less than 1 milligram....	35518
" 29	"	35519	E. M. Carpenter, Edmonton.	10 "	10	" .....	.....	None .....	35519
" 29	"	35520	Laval Pharmacy, Edmonton.	10 "	15	Bole Drug Co., Winnipeg.	.....	" .....	35520

DISTRICT OF VANCOUVER--J. E. POWER, INSPECTOR.

Mar. 26	Sulphate of Soda (Glauber's Salt)	37614	Brown & Beaton, Vancouver.	10 lb.		10 Henderson Bros., Vancouver, B.C.		None	37614
" 26	"	37615	W. K. Law, Vancouver.	10 "		"		Less than 1 milligram...	37615
" 26	"	37616	C. Muddell, Vancouver.	25 "		"		None	37616
" 26	"	37617	C. Nelson, Vancouver.	25 "		"		Contains 3 milligrams...	37617
" 26	"	37618	Laws Drug Store, Vancouver.	20 "		"		None	37618



"	26.	"	"	37619	H. Ferguson, Vancouver	1 lb.	20	"	"	.....	.....	Less than 1 milligram...	37619
"	26	"	"	37620	Fairview Drug Store, Vancouver.	1 lb.	25	Nat. Drug & Chemical Co.	.....	.....	.....	None.....	37620
"	26	"	"	37621	L. G. Henderson, Mount Pleasant.	1 lb.	20	Henderson Bros., Vancouver, B.C.	.....	.....	.....	Less than 1 milligram...	37621
"	26	"	"	37622	Independent Drug Store, Vancouver.	1 lb.	20	"	.....	.....	.....	Contains 5 milligrams...	37622
"	26	"	"	37623	McDowell, Atkins & Watson, Vancouver.	1 lb.	10	"	.....	.....	.....	Contains 10.5 milligrams.	37623

DISTRICT OF VICTORIA—D. OSULLIVAN, INSPECTOR.

May	11	Sulphate of Soda (Glauber's Salt)	39341	F. J. Williams, Victoria, B.C.	1 lb.	25	Nat. Drug & Chemical Co., Montreal, Que.	.....	.....	.....	None.....	39341
"	11	"	39342	Dean & Hiscocks, Victoria, B.C.	1 lb.	20	Henderson Bros., Victoria, B.C.	.....	.....	.....	"	39342
"	11	"	39343	Wm. Jackson & Co, Victoria, B.C.	1 lb.	25	Lymans, Ltd., Montreal, Que.	.....	.....	.....	"	39343
"	11	"	39344	D. E. Campbell, Victoria, B.C.	1 lb.	40	Henderson Bros., Victoria, B.C.	.....	.....	.....	"	39344
"	11	"	39345	W. S. Terry, Victoria, B.C.	1 lb.	20	"	.....	.....	.....	Less than 1 milligram...	39345
"	12	"	39346	John Cochrane, Victoria, B.C.	1 lb.	20	"	.....	.....	.....	None.....	39346
"	13	"	39347	Cyrus H. Bower, Victoria, B.C.	1 lb.	20	Lymans, Ltd., Montreal, Que.	.....	.....	.....	"	39347
"	13	"	39348	G. A. Fraser, Victoria, B.C.	1 lb.	20	Henderson Bros., Victoria, B.C.	.....	.....	.....	Less than 1 milligram...	39348
"	13	"	39349	B. C. Drug Co., Victoria, B.C.	1 lb.	20	"	.....	.....	.....	"	39349
"	13	"	39350	Thos. Shotbold, Victoria, B.C.	1 lb.	15	"	.....	.....	.....	None.....	39350



BULLETIN No. 181—PHOSPHATE OF SODA.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Results of Analysis, Arsenic per 100 Grams.	No. of Sample.
				Quantity	Unit				
DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.									
1909.									
April 16	Phosphate of Soda	33952	C. A. Barnstead, Halifax, N.S.	1 lb.		15 Lyman Sons & Co., Montreal.		Less than 1 milligram	33952
" 17	"	33953	National Drug and Chemical Co., Halifax, N.S.	1 lb.		15 Vendors.		"	33953
" 17	"	33954	R. J. Philips, Halifax, N.S.	1 lb.		20 Thompson Chemical Co., Baltimore, Md.		None	33954
" 19	"	33955	J. A. Craig, Yarmouth, N.S.	1 lb.		20 Mallinckrodt, New York.		"	33955
" 19	"	33956	R. F. Guest, Yarmouth, N.S.	1 lb.		20 National Drug and Chemical Co., St. John, N.B.		"	33956
" 20	"	33957	F. C. Churchill, Wolfville, N.S.	1 lb.		15 Thompson Chemical Co., Baltimore, Md.		"	33957
" 20	"	33958	A. V. Rand, Wolfville, N.S.	1 lb.		25 A. Beake Roberts Co., London, Eng.		"	33958
" 22	"	33959	W. F. Odell, Truro, N.S.	1 lb.		25 Lyman Sons & Co., Montreal.		"	33959
" 23	"	33960	Buckley Bros., Halifax, N.S.	1 lb.		15 National Drug and Chemical Co., Halifax, N.S.		"	33960
" 23	"	33961	C. E. Huggins, Halifax, N.S.	1 lb.		15 National Drug and Chemical Co., Halifax, N.S.		"	33961

DISTRICT OF PRINCE EDWARD ISLAND--THEO. MOORE, INSPECTOR.

April 15	Phosphate of Soda	38511	P. N. Enman, Summerside.	1 lb.		15 National Drug and Chemical Co., Halifax.		None	38511
" 15	"	38512	A. W. P. Gourlie, Summerside.	1 lb.		20 Lyman Knox & Co., Montreal.		"	38512
" 15	"	38513	Edgar Keir, Kensington.	1 lb.		15 National Drug Co., Halifax.		"	38513
" 15	"	38514	Johnson & Johnson, Charlottetown.	1 lb.		15 Thompson Chemical Co., Baltimore, Md.		"	38514
" 15	"	38515	C. D. Rankin, Charlottetown.	1 lb.		12 National Drug and Chemical Co., Halifax.		"	38515
" 15	"	38516	A. W. Reddin, Charlottetown.	1 lb.		15 Schoell Kopp Hartford & Hanna Co., New York.		"	38516



SESSIONAL PAPER No. 14

"	15	"	"	38517	G. E. Hughes, Charlotte- town.	$\frac{1}{2}$ lb.	15 National Drug Co., Halifax.	"	38517
"	15	"	"	38518	J. G. Jamieson, Char- lottetown.	$\frac{1}{2}$ lb.	20 Lyman Sons & Co., Mont- real.	"	38518
"	15	"	"	38519	McDonald & McKinnon, Charlottetown.	$\frac{1}{2}$ lb.	15 Lyman's Ltd., Montreal	"	38519
"	15	"	"	38520	Reddin Bros., Charlotte- town.	$\frac{1}{2}$ lb.	15 Lyman Sons & Co., Mont- real.	"	38520

## DISTRICT OF NEW BRUNSWICK J. C. FERGUSON, INSPECTOR.

Mar.	25	Phosphate of Soda	29942	G. A. Moore, St. John, N.B.	$\frac{1}{2}$ lb.	30 E. Merck, Darmstadt	None	22942
"	26	"	29943	Wm. Hawker & Son, St. John, N.B.	1 lb.	30 Mallinckrodt Chemical Works, New York.	"	22943
April	6	"	29944	R. T. Mack, Fredericton, N.B.	$\frac{1}{2}$ lb.	16 The National Drug and Chemical Co., St. John, N.B.	"	22944
"	6	"	29945	John M. Wiley, Fred- erickton, N.B.	$\frac{1}{2}$ lb.	20 Unknown	"	22945
"	7	"	29946	E. W. Main, Woodstock, N.B.	$\frac{1}{2}$ lb.	15 Mallinckrodt Chemical Works, New York.	Less than 2 milligram	22946
"	7	"	29947	Garden Bros., Wood- stock, N.B.	$\frac{1}{2}$ lb.	30 Lyman Sons & Co., Mont- real.	"	22947
"	7	"	29949	D. W. C. Stevens, Wood- stock, N.B.	1 lb.	30 Thomson Chemical Co., Baltimore, Md., U.S.	None	22949
"	15	"	29950	J. McD. Cooke, Mon- ton, N.B.	$\frac{1}{2}$ lb.	20 National Drug and Chemical Co., Montreal.	"	22950
"	16	"	29951	Thos. J. Durick, New- castle, N.B.	$\frac{1}{2}$ lb.	25 Mallinckrodt Chemical Works, New York.	"	22951
"	19	"	29952	Thomas Wran, Camp- bellton, N.B.	$\frac{1}{2}$ lb.	15 Lyman's Ltd., Montreal.	"	22952

## DISTRICT OF QUEBEC E. BELAND, INSPECTOR.

April	20	Phosphate of Soda	36718	W. Brunette & Cie, Quebec.	$\frac{1}{2}$ lb.	10 Provident Chemical Co., U.S.	None	36718
"	20	"	36719	L. E. Martel, Quebec	$\frac{1}{2}$ lb.	15 National Drug Co., Montreal	"	36719
"	20	"	36720	D. R. Gagnon, Quebec	$\frac{1}{2}$ lb.	20 Ed. Morin & Cie., Quebec.	Less than $\frac{1}{2}$ milligram	36720
"	20	"	36721	V. Giroux, Quebec	$\frac{1}{2}$ lb.	10 Kerry Watson & Co., Mont- real.	None	36721
"	20	"	36722	Laroche & Corry, Quebec.	$\frac{1}{2}$ lb.	40 Lyman & Son.	"	36722
"	20	"	36723	R. B. Roger, Quebec	1 lb.	25 Kerry Watson & Co., Mont- real.	Less than $\frac{1}{2}$ milligram	36723
"	20	"	36724	T. E. Dubé, Quebec	1 lb.	45 Unknown	"	36724
"	20	"	36725	C. T. Deslisle, Quebec	1 lb.	25 National Drug Co., Montreal	None	36725
"	20	"	36726	A. L. Jolicoeur, Quebec	1 lb.	10 Lyman & Son, Montreal.	"	36726
"	20	"	36727	F. E. Gauvreau & Freres, Quebec.	1 lb.	45 Lyman & Son, Montreal.	"	36727



BULLETIN No. 181.—PHOSPHATE OF SODA.

Date of Collection.	Nature of Sample.	Name and Address of Vendor.	(Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Results of Analysis, Arsenic per 100 Grams.	No. of Sample.
			Quantity	Cents.				

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

1909.

April 21	Phosphate of Soda.	1056 Dr. Grey, St. Jean.	$\frac{1}{2}$ lb.	20	Lymans, Ltd., Montreal.	Extra pure crystals, Ph. Bull. 98.	Less than $\frac{1}{2}$ milligram.	1056
" 22	"	1057 G. Dozais, Granby.	$\frac{1}{2}$ " "	35	E. Merck, Germany.	"	None.	1057
" 29	"	1058 J. C. Sutherland, Richmond.	$\frac{1}{2}$ " "	25	Lymans, Ltd., Montreal.	"	"	1058
May 5	"	1059 Fraser's Drug Store, Sherbrooke.	$\frac{1}{2}$ " "	15	"	"	"	1059
" 5	"	1060 W. J. H. McKindsey, Lennoxville.	1 " "	30	National Drug, Montreal.	Pure granular.	"	1060
" 25	"	1061 Dr. J. A. Viger, St. Hyacinthe.	$\frac{1}{2}$ " "	15	Lymans, Ltd., Montreal.	"	"	1061
" 25	"	1062 Phar. St. Jacques, St. Hyacinthe.	1 " "	25	National Drug, Montreal.	"	"	1062
" 25	"	1063 Phar. Brodeur, St. Hyacinthe.	$\frac{1}{2}$ " "	15	"	"	"	1063
" 26	"	1064 A. G. H. Béique, Magog.	$\frac{1}{2}$ " "	15	Lymans, Ltd., Montreal.	"	"	1064
" 27	"	1065 Wright & Co., St. Jean.	$\frac{1}{2}$ " "	15	"	"	"	1065

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

April 19	Phosphate of Soda.	40081 Arthur Maillet, Montreal.	$\frac{1}{2}$ lb.	5	Unknown.	"	None.	40081
" 19	"	40082 A. E. Gravelle, Montreal.	$\frac{1}{2}$ " "	13	"	"	"	40082
" 23	"	40083 Dr. J. E. St. Onge, Valleyfield, P.Q.	$\frac{1}{2}$ " "	15	"	"	Less than $\frac{1}{2}$ milligram.	40083
" 23	"	40084 Quenneville & Guerin, Montreal.	$\frac{1}{2}$ " "	15	"	"	None.	40084
" 26	"	40085 J. T. Gaudet, Joliette, P.Q.	$\frac{1}{2}$ " "	35	Lymans, Ltd.	"	"	40085
May 4	"	40086 J. H. Nault, Montreal.	$\frac{1}{2}$ " "	20	Merck.	"	"	40086



"	4	"	"	40087	E. Ethier, Montreal.....	$\frac{1}{2}$ " ..	25	Lymans, Ltd.....	" .....	40087
"	4	"	"	40088	J. A. Asselin, Montreal.....	$\frac{1}{2}$ " ..	10	" .....	" .....	40088
"	4	"	"	40089	Louis Fortier, Montreal.....	$\frac{1}{2}$ " ..	20	" .....	" .....	40089

DISTRICT OF OTTAWA—J. A. RICEY, INSPECTOR.

Mar.	16	Phosphate of Soda.....	22961	Pharmacie Canadienne, Hull.....	$\frac{1}{2}$ lb ..	15	Unknown.....	" .....	None.....	22961
"	17	"	22962	H. Therien, Hull.....	$\frac{1}{2}$ " ..	20	" .....	" .....	" .....	22962
"	22	"	22963	Dr. A. Lyon, Shawville.....	$\frac{1}{2}$ " ..	15	Lymans, Ltd., Montreal ..	" .....	" .....	22963
"	23	"	22964	Jas. Clark, Renfrew.....	$\frac{1}{2}$ " ..	15	" .....	" .....	" .....	22964
"	24	"	22965	Jos. Valiquette Co., Ltd., Ottawa.....	$\frac{1}{2}$ " ..	20	National Drug & Chemical Co., Ottawa.....	" .....	" .....	22965
"	23	"	22966	J. M. Plaunt, Ltd., Renfrew.....	$\frac{1}{2}$ " ..	20	Lyman Sons & Co., Montreal ..	Less than $\frac{1}{2}$ milligram...	" .....	22966
"	24	"	22967	Thos. Payment, Ottawa.....	$\frac{1}{2}$ " ..	20	Ottawa Drug Co, Ottawa.....	" .....	" .....	22967
"	26	"	22968	E. D. Story, Ottawa.....	$\frac{1}{2}$ " ..	20	Unknown.....	" .....	" .....	22968
"	26	"	22969	E. R. Desfosiers, Ottawa.....	$\frac{1}{2}$ " ..	15	Ottawa Drug Co., Ottawa.....	" .....	" .....	22969
"	26	"	22970	Estate W. H. Roger, Ottawa.....	$\frac{1}{2}$ " ..	20	Unknown.....	" .....	" .....	22970

DISTRICT OF KINGSTON—JAMES HOGAN, INSPECTOR.

Mar.	17	Phosphate of Soda.....	39491	H. Skinner, Kingston.....	$\frac{1}{2}$ lb..	8	National Drug Co.....	" .....	None.....	39491
"	17	"	39492	A. S. Chown, Kingston.....	$\frac{1}{2}$ " ..	10	Lynman & Sons, Montreal....	Less than $\frac{1}{2}$ milligram...	" .....	39492
"	18	"	39493	W. W. Gibson, Kingston.....	$\frac{1}{2}$ " ..	15	National Drug Co .....	" .....	" .....	39493
"	22	"	39494	F. C. Clarke, Belleville.....	$\frac{1}{2}$ " ..	15	" .....	None.....	" .....	39494
"	22	"	39495	R. Templeton, Belleville.....	$\frac{1}{2}$ " ..	10	Lynman & Sons, Montreal....	" .....	" .....	39495
"	22	"	39496	O. G. Johns, Cobourg.....	$\frac{1}{2}$ " ..	15	National Drug Co.....	" .....	" .....	39496
"	22	"	39497	A. J. Gould, Cobourg.....	$\frac{1}{2}$ " ..	15	E. G. West, Toronto.....	Less than $\frac{1}{2}$ milligram...	" .....	39497
"	22	"	39498	C. J. Webster, Cobourg.....	$\frac{1}{2}$ " ..	15	" .....	None.....	" .....	39498
"	23	"	39499	McDermid & Jury, Peterboro.....	$\frac{1}{2}$ " ..	15	Drug Trading Co., Toronto....	" .....	" .....	39499
"	23	"	39500	L. A. Payne, Peterboro.....	$\frac{1}{2}$ " ..	15	National Drug Co .....	Less than 1 milligram...	" .....	39500



BULLETIN No. 181.—PHOSPHATE OF SODA.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Results of Analysis. Arsenic per 100 Grams.	No. of Sample.
				Quantity	Cents.				
DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.									
April 7	Phosphate of Soda.	36246	J. D. Morrison, Hamilton.	1 lb.	13	Winer & Co., Hamilton.	.....	None.	36246
" 8	"	36247	F. E. York, Aurora.	1/2 "	20	National Drug and Chemical Co., Ltd., 'Na-Dru-Co.', Toronto.	.....	"	36247
" 8	"	36248	R. J. Y. Broughton, New Market.	1/2 "	15	Mallinckrodt Chem. Works, 'M. C. Co.', Lt. Louis, & New York.	.....	Less than 1 milligram.	36248
" 12	"	36249	S. Oldham, Brantford.	1 "	10	W. R. Campbell, Bradford.	.....	None.	36249
" 13	"	36250	H. G. Robertson, Barrie.	1/2 "	13	Dominion Drug Co., Ltd., Hamilton.	.....	"	36250
" 14	"	36251	Brown Bros., Tottenham.	1/2 "	15	Lyman Bros. & Co., Ltd., Toronto.	.....	"	36251
" 20	"	36252	W. R. Hear, Toronto.	1 "	15	Unknown.	.....	Less than 1/2 milligram.	36252
" 20	"	36253	J. H. Huty, Yonge St., Toronto.	1 "	15	Mallinckrodt Chem. Works, 'M. C. Co.', St. Louis, & New York.	.....	None.	36253
" 20	"	36254	Chas. J. Stoddart, Toronto.	1/2 "	15	National Drug Co., Ltd., Toronto.	.....	"	36254
" 20	"	36255	W. H. Andrews, Toronto.	1/2 "	15	Drug Trading Co., Ltd., 'M. C. Co.', Toronto.	.....	"	36255

DISTRICT OF LONDON—T. KIDD, INSPECTOR.

Mar. 25	Phosphate of Soda	30594	J. D. McKee, Guelph.	1 lb.	20	Dom. Drug. Co., Hamilton.	.....	Less than 1/2 milligram.	30594
April 1	"	30619	Walter McKibbin, Wingham.	1 " "	35	Drug Trading Co., Toronto.	.....	None.	30619
" 2	"	30628	J. Livingston, Listowel.	1 " "	30	National Drug Co., Toronto.	.....	"	30628
" 13	"	30643	J. H. Schmidt, Berlin.	1/4 " "	25	"	.....	"	30643
" 13	"	30644	A. J. Roose, Berlin.	1/4 " "	15	"	.....	"	30644
" 13	"	30645	Clark Bros., Berlin.	1/4 " "	25	Lyman Bros., Toronto.	.....	"	30645
" 15	"	30646	Alexander Stewart, Guelph.	1/4 " "	27	Nat. Drug Co., Hamilton.	.....	"	30646



"	15	"	30647	A. Petrie, Guelph.	1 lb.	25 Mallinckrodt Chem. Works, M.C. Co., St. Louis & N.Y.	"	30647
"	15	"	30648	J. B. Broadfoot, Guelph.	1 lb.	30 Howard & Sons, 'Howards', London, Eng.	"	30648
"	15	"	30649	M. Burgardis, Guelph.	1 lb.	25 Nat. Drug Co., Hamilton.	"	30649

DISTRICT OF WINDSOR—JNO. TALBOT, INSPECTOR.

April	8	Phosphate of Soda	34782	E. L. Guillemont, London.	1 lb.	10 National Drug Co.	None	34782
"	8	"	34787	M. Sumner, London	1 lb.	15 "	"	34787
"	8	"	34789	A. D. Bruce	1 lb.	15 Unknown	"	34789
"	8	"	34790	H. J. Childs, London East.	1 lb.	15 National Drug Co.	"	34790
"	10	"	34793	M. B. Percival, London, Ont.	1 lb.	20 "	Less than 1 milligram.	34793
"	14	"	34797	G. H. Small, St Thomas	1 lb.	20 "	None	34797
"	14	"	35903	Wm. H. Taylor, St. Thomas.	1 lb.	20 National Drug Co., London, Ont.	"	35903
"	15	"	35908	W. H. Stepler, Strathroy.	1 lb.	20 Unknown	"	35908
"	16	"	35913	J. A. Scott, Glencoe	1 lb.	20 National Drug Co., London, Ont.	"	35913

DISTRICT OF MANITOBA—A. C. LARIVIERE, INSPECTOR.

April	15	Phosphate of Soda	35856	West End Drug Stores, Winnipeg.	1 lb.	15 Unknown	None	35856
"	15	"	35857	Baird's Drug Store, Winnipeg.	1 lb.	20 N. C. Polson & Co., Kingston	"	35857
"	15	"	35858	W. W. McKeague, Winnipeg.	1 lb.	25 Unknown	Less than 1 milligram	35858
"	15	"	35859	E. Nesbitt, Winnipeg	1 lb.	25 National Drug Co., Montreal.	" 1/2 "	35859
"	15	"	35860	D. W. Bradshaw, Winnipeg.	1 lb.	25 Unknown	" 1/2 "	35860
"	15	"	35861	R. J. Pelton, Winnipeg	1 lb.	25 The Bole Drug Co., Winnipeg.	None	35861
"	16	"	35862	The Gordon Mitchell Drug Co., Winnipeg.	1 lb.	15 Howard & Sons, London, Eng.	Less than 1 milligram	35862
"	16	"	35863	Pulford Drug Co., Winnipeg.	1 lb.	20 E. Merck, 'Mercks', Germany.	" 1/2 "	35863
"	16	"	35864	Poyntz & Co., Winnipeg.	1 lb.	15 Thomson Chem. Co., Baltimore, U.S.	None	35864
"	16	"	35865	Connell & Co., Winnipeg.	1 lb.	15 J. Winer & Co., Hamilton.	Less than 1 milligram	35865



BULLETIN No. 181.--PHOSPHATE OF SODA.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Results of Analysis. Arsenic per 100 Grams.	No. of Sample.
				Quantity	Cents.				

1909. DISTRICT OF CALGARY R. W. FLETCHER, INSPECTOR.

April 27	Phosphate of Soda.	35521	E. M. Cawker, Medicine Hat.	1 lb.	40.	Merck & Co., New York.	.....	None.	35521
" 27	"	35522	C. S. Pringle, Medicine Hat.	"	"	Lyman, Sons & Co., Montreal.	.....	None.	35522
" 27	"	35523	B. F. Souch, Medicine Hat.	"	"	Nat. Drug & Chem. Co., Winnipeg.	.....	None.	35523
" 29	"	35524	G. H. Graydon, Edmonton.	"	25.	Mallinckrodt Chem. Works, Germany.	.....	None.	35524
" 29	"	35525	T. G. Carson, Edmonton.	"	20.	J. Winer & Co., Hamilton.	.....	None.	35525
" 29	"	35526	A. Archibald, Edmonton.	"	"	Mallinckrodt Chem. Works, Germany.	.....	None.	35526
" 29	"	35527	Edmonton Drug Co., Edmonton.	"	"	Lyman, Sons & Co., Montreal.	.....	None.	35527
" 29	"	35528	J. H. Lives, Edmonton.	"	25.	N. C. Polson & Co., Kings-ton.	.....	None.	35528
" 29	"	35529	E. M. Carpenter, Edmonton.	"	"	Lyman, Sons & Co., Montreal.	.....	None.	35529
" 29	"	35530	Laval Pharmacy, Edmonton.	"	15.	N. C. Polson & Co., Kings-ton.	.....	None.	35530

DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR.

Mar. 29	Phosphate of Soda.	37624	F. J. Mackenzie, New Westminster.	1 lb.	25.	J. Winer & Co., Hamilton.	.....	None.	37624
" 29	"	37625	T. A. Muir, New Westminster.	"	"	Henderson Bros., Vancouver.	.....	None.	37625
" 29	"	37626	D. S. Curtis, New Westminster.	"	"	Henderson Bros., Vancouver.	.....	Less than 1/2 milligram.	37626
" 29	"	37627	H. Ryan, New Westminster.	"	"	Henderson Bros., Vancouver.	.....	Less than 1/2 milligram.	37627
" 29	"	37628	J. Houghton, Vancouver.	"	"	Henderson Bros., Vancouver.	.....	None.	37628



"	30	"	"	37629	Manhattan Pharmacy, Vancouver.	"	15	Henderson Bros., Vancouver	Less than $\frac{1}{2}$ milligram.	37629
"	30	"	"	37630	J. B. Boyle (Kitsilano), Vancouver.	"	25	Henderson Bros., Vancouver	None.	37630
"	30	"	"	37631	Cameron's Drug Store (Fairview), Vancouver.	"	"	Henderson Bros., Vancouver	Less than $\frac{1}{2}$ milligram.	37631
"	30	"	"	37632	R. M. Morrison, Vancou ver.	"	15	Henderson Bros., Vancouver	None.	37632
"	31	"	"	37633	Marrett & Reid (English Bay), Vancouver.	"	25	Henderson Bros., Vancouver	None	37633

DISTRICT OF VICTORIA—D. OSULLIVAN, INSPECTOR.

May	11	Phosphate of Soda.	39351	F. J. Williams	$\frac{1}{2}$ lb.	25	Mallinckrodt Chem. Works, St. Louis, U.S.A.	None.	39351
"	11	"	39352	Dean & Hiscocks.	"	20	Henderson Bros., Victoria, B.C.	None.	39352
"	11	"	39353	Wm. Jackson & Co.	"	25	Lymans, Ltd., Montreal.	Less than $\frac{1}{2}$ milligram.	39353
"	12	"	39354	D. E. Campbell.	"	20	Lymans, Ltd., Montreal.	None.	39354
"	12	"	39355	W. S. Terry	"	"	Henderson Bros., Victoria, B.C.	None.	39355
"	13	"	39356	John Cochrane.	"	"	Lymans, Ltd., Montreal.	None.	39356
"	13	"	39357	Cyrus H. Bowes.	"	"	Lymans, Ltd., Montreal.	Less than $\frac{1}{2}$ milligram.	39357
"	13	"	39358	Geo. A. Fraser.	"	"	Henderson Bros., Victoria, B.C.	Less than $\frac{1}{2}$ milligram.	39358
"	13	"	39359	B. C. Drug Co.	"	"	Henderson Bros., Victoria, B.C.	None.	39359
"	13	"	39360	Thos. Shotbolt	"	15	Mallinckrodt Chem. Works, New York, U.S.A.	None.	39360







## APPENDIX C.

BULLETIN No. 182—STANDARD FERTILIZERS 1909 AND  
THE FERTILIZERS ACT, 1909.

OTTAWA, July 13, 1909.

W. J. GERALD, Esq.  
Deputy Minister of Inland Revenue.

SIR, —I beg to hand you a report upon 182 samples of Commercial Fertilizers sent in as standards to represent the different brands offered on the Canadian market during the season of 1909. This is in accordance with the requirements of section 3 of the Fertilizers Act of 1890.

This will be the last issue of a Bulletin of this description. The Fertilizers Act of 1909 comes into force with the beginning of 1910; and renders the publication of standards unnecessary. In order to give as wide distribution as possible to the new Act, it is published in full in this bulletin.

One of the reasons for discontinuing the publication of standards is the practical impossibility of securing the necessary data in time to be of service to intending purchasers of fertilizers. Reference to the date of registration of the samples now reported will illustrate this.

It will be seen that, with very few exceptions, the samples sent in by manufacturers fully meet the claims made for them. This is as might be expected, and is a matter of much less importance to the farmer than that the samples *as offered in the market* should come up to the claims made for them. By filing with the department a sample containing less fertilizing material than claimed on the label, the manufacturer incurs no penalty, since he does not effect any sale by his action. Of course it is only by unintentional oversight, or by error in mixing that a manufacturer fails to send this department a sample fully up to his guarantee.

It may be well to point out briefly the main features of the new Fertilizers Act.

1. Every fertilizer must be registered, and the registration number must be affixed to every package or parcel sold.

2. The registration number remains constant, for the same fertilizer, from year to year.

3. The manufacturer must attach a statement to every package guaranteeing definite amounts of nitrogen, phosphoric acid and potash.

4. Departmental inspectors will purchase samples of all brands of fertilizers offered on the market. These will be analysed, and the results published annually. Users of fertilizers will be able to know, from this publication, whether the manufacturer lives up to his guarantee or not.

5. Should any purchaser wish to have a special analysis of a registered fertilizer as furnished to him, he may get such analysis at a nominal fee of one dollar. His sample must be taken in such a way as to fairly protect the vendor. The registration number under which sold, enables easy and certain identification to be made.

6. Any purchaser who causes a fertilizer to be specially made to his order, can have such fertilizer analysed, but it will cost him five dollars.

7. Fertilizers imported for use, and not for sale, are not inspected under the Act. The importer may have an analysis made, but it will cost him five dollars.



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8 In reports of fertilizer analysis, it has been the custom to introduce a statement of the relative value of the fertilizer based upon the content in phosphoric acid, nitrogen and potash. This feature will be discontinued, because of the facts, (1) That trustworthy relative values for the different ingredients of a fertilizer cannot be obtained. (2) that the value of a fertilizer is not solely dependent upon the cost of materials entering into its composition. The character of the crop and the nature of the soil are very important factors in determining the value of a fertilizer in use, and the cost of labour and transportation, as well as the degree of perfection attained in grinding and in mixing are elements of value which are not connotated in the calculation of relative values. (3) That the so-called *relative values* hitherto published have been made use of by salesmen, to the injury of purchasers of fertilizers. This has been done by reading into these numbers meanings which they were not intended to carry.

I may further add, that in spite of every precaution taken by the framers of a Fertilizer Inspection Act, and in spite of the utmost care by an executive department in its administration, true economy in the employment of fertilizers makes demands upon the intelligence of the farmer. It is necessary that he should acquaint himself with the terms used in describing fertilizers: with the needs of plants and with the nature of soils. The man who reads and thinks and who is willing to do some experimental work on his own fields, is the man who can afford to use fertilizers because he will use them intelligently.

The text of the new Fertilizers Act is appended to this report; and fertilizer inspection in 1910 will be carried out under its requirements.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



SESSIONAL PAPER No. 14

## 8-9 EDWARD VII.—CHAP 16.

## An Act respecting Agricultural Fertilizers.

[Assented to 19th May, 1909.]

His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows :—

1. This Act may be cited as *The Fertilizers Act, 1909*. Short title.
2. In this Act, unless the context otherwise requires,—
  - (a) “Minister” means the Minister of Inland Revenue; Definitions.  
“Minister.”
  - (b) “fertilizer” includes every natural or artificial manure containing phosphoric acid, or nitrogen, or potash, except ordinary stable manure; “Fertilizer.”
  - (c) “registration number” means the specific number given by the Minister, under this Act, to each brand of fertilizer; “Registration number.”
  - (d) “agent” means any person whose name has been filed with the Minister as provided in section 4 of this Act; “Agent.”
  - (e) “guaranteed analysis” means the valuation of a fertilizer by the manufacturer or agent in terms of its content of phosphoric acid, nitrogen and potash. “Guaranteed analysis.”
3. Fertilizers shall be considered as of distinct brands when differing either in guaranteed composition, trade mark, name, or in any other characteristic method of marking. Distinct brands.
4. Where the manufacturer of any fertilizer has his factory or chief place of business elsewhere than in Canada, he shall file with the Minister the name of a person resident in Canada, and acceptable to the Minister, or a corporation having its head office in Canada, as the agent or representative of such manufacturer for all the purposes of this Act; and any notice to, or communication or dealing with, such agent or representative by the Minister shall be effectual for all the purposes of this Act. Name of foreign manufacturer's agent or representative in Canada to be filed with Minister.
2. In default of such filing, the Minister may take any proceeding or action under this Act *ex parte*, and without any notice to or communication with such person or corporation. Default of filing.
5. Every brand of fertilizer offered for sale in Canada shall bear a registration number, which shall be permanently assigned to the particular brand or species of fertilizer for which it is issued. The number shall be granted by the Minister on the application of the manufacturer of such brand of fertilizer, or his agent, and on payment of a fee of two dollars. Registration number.  
Fee.
6. Every application for a registration number shall be accompanied by a statement giving the following particulars :—
  - (a) Name of brand for which the registration number is asked, and trade mark, if any; Application for registration number.
  - (b) Name and address of manufacturer;
  - (c) Name and address of the person applying for registration;
  - (d) Guaranteed analysis;
  - (e) Materials from which the fertilizer is made.
7. The registration number must be affixed by the manufacturer, or agent, in a plain and legible manner, to every package of fertilizer sold or offered for sale, and shall constitute an identification of the brand. In addition to the registration number there must be legibly printed, on every package of fertilizer sold, the statement set out in schedule A to this Act. This condition shall be held to be fulfilled if a printed tag, bearing the registration number and the statement required, is securely attached to the package. Registration number; how affixed.  
Statement required.



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Notice of  
change of  
formula and  
application  
for new  
number.

8. If a manufacturer elects to change the formula or composition of any fertilizer for which a registration number has been granted, he shall notify the Minister to that effect, and shall apply for a new registration number to designate the new or altered fertilizer, and the former registration number shall be cancelled, and shall not be reissued.

Annual  
license to  
sell.

9. No manufacturer of a fertilizer, and no agent of any such manufacturer, shall sell or offer for sale any fertilizer, as defined by section 2 of this Act, unless he has a license under this Act authorizing the sale thereof.

Fee.

2. Upon application of any such manufacturer or his agent, and upon payment of a fee of five dollars therefor, the Minister may grant a license authorizing the sale of such brands of fertilizers as are named in the license.

Period of  
validity.

3. Such license shall be in such form as the Minister prescribes and shall confer authority to sell during the calendar year in which the license is issued.

Renewal.

4. The Minister may renew any such license from year to year.

Purchaser of  
registered  
fertilizer may  
obtain  
analysis.  
Fee.

10. Any purchaser of a registered fertilizer as delivered to him, by making application for such analysis, accompanied by a sample of the fertilizer of at least one pound weight, and taken in accordance with the directions given in schedule B to this Act and on payment of a fee of one dollar.

Certain  
officers to act  
as inspectors.  
R.S., c. 133.

11. The officers of Inland Revenue, the officers of Customs, the inspectors and deputy inspectors of weights and measures, and the inspectors of food, drugs and agricultural fertilizers acting under *The Adulteration Act* shall, when required so to do by any regulation made in that behalf by the Governor in Council or the Minister, act as inspectors of fertilizers, and shall procure and submit for analysis samples of fertilizers offered for sale in Canada.

Inspectors  
to procure  
samples for  
analysis.

12. Every inspector of fertilizers shall, whenever instructed by the Minister so to do, obtain for analysis a sample of every fertilizer for sale in the district for which such inspector is appointed.

Analysis and  
publication  
of results.

2. Every sample so obtained shall be transmitted to the Minister for submission to the chief analyst for analysis; and the result of all such analyses shall be published annually by the Minister in such manner as he sees fit, together with such other information pertaining to fertilizers as he deems it desirable should be published.

Fertilizers  
imported for  
personal use.  
Analysis.

13. If any fertilizer is imported for the personal use of the importer, and not for sale, this Act shall not apply thereto, but such importer may secure an analysis of the fertilizer, as delivered to him, on application to the Minister and on payment of a fee of five dollars. The sample submitted must be taken in accordance with the requirements of section 10 of this Act.

Fertilizers  
made  
to order, and  
not intended  
for sale.

14. This Act shall not apply to fertilizers which are manufactured to the order of the purchaser and are not intended for sale, unless such fertilizers be actually sold by such purchaser, but such purchaser may secure an analysis of the fertilizer as delivered to him, under the conditions stated in section 10 of this Act, on payment of a fee of five dollars.

Analysis.

15. Every manufacturer or agent, or purchaser in the case provided for in the next preceding section, who sells or offers or exposes for sale any fertilizer in respect of which the provisions of this Act have not been complied with; or who sells or offers or exposes for sale any fertilizer which does not contain the percentage of constituents mentioned in the manufacturer's certificate accompanying such fertilizer, shall be liable in each case to a penalty not exceeding fifty dollars for the first offence, and for each subsequent offence to a penalty not exceeding one hundred dollars and, in default of payment of such penalty, to imprisonment for thirty days. Provided that a deficiency of one half of one per cent of the ammonia or its equivalent in nitrogen or nitric acid, or of phosphoric acid, or of the

Penalties for  
non-com-  
pliance  
with this  
Act.

Proviso as  
to evidence  
of fraudulent  
intent.



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potash claimed to be contained in the fertilizer, shall not be considered as evidence of fraudulent intent, if the total value of the fertilizer in fertilizing materials is substantially equivalent to the guaranteed statement made by the manufacturer or agent.

16. Every person who forges, or utters or uses knowing it to be forged, any manufacturer's certificate, registration number, or certificate of analysis required under this Act, is guilty of an indictable offence, and is liable to imprisonment for a term not exceeding two years, with or without hard labour.

17. Every person who wilfully applies to any fertilizer a certificate, or tag, or registration number given in relation to any other package or lot of fertilizer, every person who sells an unregistered fertilizer, and every person who lowers the fertilizing value of a registered fertilizer by mixing any other substance therewith, after the said fertilizer has been placed upon the market by the manufacturer or agent, shall be liable, on summary conviction, to a penalty not exceeding five hundred dollars, and in default of payment to imprisonment for a term not exceeding twelve months.

18. Every person who gives a false certificate in writing with respect to a fertilizer sold by him as a principal or agent, shall be liable on summary conviction to a penalty not exceeding five hundred dollars, and in default of payment to imprisonment for a term not exceeding twelve months.

19. All fees paid and penalties recovered under this Act shall form part of the Consolidated Revenue Fund of Canada.

20. *The Fertilizers Act*, chapter 132 of the Revised Statutes, 1906, is repealed.

21. This Act shall come into force on the first day of January, one thousand nine hundred and ten.

## SCHEDULE A.

## STATEMENT TO BE ATTACHED TO PACKAGE.

1. (*Name of brand.*)
2. (*Registration number.*)
3. (*Name and address of manufacturer.*)
4. (*Analysis, as guaranteed by the manufacturer.*)

5. Notice. Any purchaser may have an analysis made by the Department of Inland Revenue, on payment of one dollar. Samples must be taken in conformity with the regulations. For regulations address the Deputy Minister of Inland Revenue, Ottawa.

## SCHEDULE B.

## INSTRUCTIONS FOR TAKING SAMPLES OF FERTILIZERS TO BE SUBMITTED FOR ANALYSIS IN ACCORDANCE WITH SECTION 10.

Samples of fertilizer submitted by a purchaser for analysis must be inclosed in glass jars or bottles, and properly sealed. The samples must be taken in the presence of the vendor or of his representative.

*Process of Sampling.*

In lots of five tons, or less, portions shall be drawn from each separate package, and from at least ten packages; or if less than ten packages are present, all shall be sampled. In lots of over five tons, at least ten per cent of the packages shall be sampled. The portions so taken shall be thoroughly mixed in the presence of the parties interested, and from this mixture the sample sent to the Minister is to be taken: and must bear the signature of vendor and purchaser; and at the same time a duplicate sample is to be left with the party whose goods are inspected, subject to the call of the manufacturer or agent.

Forgery of  
certificate,  
registration  
number, etc.

Penalty.

Unlawful  
use of  
certificate,  
registration  
number, etc.

Penalty.

False  
certificate.  
Penalty.

Application  
of fees and  
penalties.  
R.S. c. 132  
repealed.

Commence-  
ment of Act.



Date When Received.	Designation.	Number of Sample.	Name and Address of Manufacturer.	By Whom Sent.	From what Materials Produced.	—
1909.						
Jan. 25	Tankage.....	2269	Davies Packing Co., Ltd., Har-riston, Ont.	Manufactures...	Blood, bone, etc.	Guaranteed contents. Contents as found...
" 25	Unground Tank- age.	2270	Wm. Davies Co., Ltd., Toronto.	" ..	" ..	Guaranteed contents. Contents as found...
" 25	Concentrated Tankage.	2271	" ..	" ..	" ..	Guaranteed contents. Contents as found...
" 25	Ground Bone...	2272	" ..	" ..	Bone .....	Guaranteed contents. Contents as found..
" 25	Dried Blood....	2273	" ..	" ..	Blood .....	Guaranteed contents. Contents as found...
" 25	Standard Tank- age.	2274	The Laing Packing Co., Montreal.	" ..	Tankage.....	Guaranteed contents. Contents as found...
Feb. 3	Sulphate of Am- monia.	2275	W. A. Freeman Co., Ltd., Ham- ilton, Ont.	" ..	Sulphate of am- monia.	Guaranteed contents. Contents as found...
" 3	Nitrate of Soda.	2276	" ..	" ..	Nitrate of soda..	Guaranteed contents.  Contents as found...
" 3	Sulphate of Pot- ash.	2277	" ..	" ..	Sulphate of pot- ash .. .	Guaranteed contents. Contents as found...
" 3	Muriate of Pot- ash.	2278	" ..	" ..	Muriate of pot- ash.	Guaranteed contents. Contents as found...
" 3	Pure Bone Meal	2279	" ..	" ..	Phosphate, bone, blood, tankage, sulphuric acid, muriate of pot- ash, sulphate of potash, ammo- nia, sulph., ni- trate of soda.	Guaranteed contents. Contents as found...
" 3	Phosphate Pow- der.	2280	" ..	" ..	" ..	Guaranteed contents. Contents as found...
" 3	Phosphate Rock, ground.	2281	" ..	" ..	" ..	Guaranteed contents. Contents as found...
" 3	Tankage Manure	2282	" ..	" ..	" ..	Guaranteed contents. Contents as found...
" 3	Potato Manure.	2283	" ..	" ..	" ..	Guaranteed contents. Contents as found...
" 3	Tobacco Manure	2284	" ..	" ..	" ..	Guaranteed contents. Contents as found...
" 3	Sure Growth Manure.	2285	" ..	" ..	" ..	Guaranteed contents. Contents as found...
" 3	Celery and Early Vegetable Ma- nure.	2286	" ..	" ..	" ..	Guaranteed contents. Contents as found...
" 3	Bone and Potash	2287	" ..	" ..	" ..	Guaranteed contents. Contents as found...
" 3	Lawn Dressing .	2288	" ..	" ..	" ..	Guaranteed contents. Contents as found...



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## STANDARD FERTILIZERS.

RESULTS OF ANALYSIS.											Remarks and Opinion of the Chief Analyst.
Nitrogen, p.c.		Phosphoric Acid, per cent.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.	Number of Sample.	
Total, includ- ing that of Nitric Acid or Ammonia if Present.	Total, calcu- lated as Am- monia.	Soluble in Water.	Citric Soluble.	Insoluble.	Total.	Total avail- able.					
p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	\$ c.		
9.19	11.16				10.14			8.59		2269	
9.04	10.98	Trace.	9.61	1.04	10.65	9.61		8.15	41.62	Up to guarantee.	
7.14	8.67				12.92			16.06		2270	
7.60	9.23	Trace.	10.65	2.50	13.15	10.65		16.40	38.30	"	
12.22	14.84							8.43		2271	
12.74	15.47	Trace.	1.05	0.25	1.30	1.05		6.40	44.55	"	
4.05	4.92				23.41			6.12		2272	
4.13	5.02		15.40	9.30	24.70	15.40		4.90	33.77	"	
10.99	13.34							19.23		2273	
10.63	12.90		4.22	0.90	5.12	4.22		18.95	41.05	"	
6.51	7.90				12.58			6.20		2274	
6.57	7.97	0.35	9.43	3.22	13.00	9.78		5.65	34.10	"	
20.59	25.00								70.00	2275	
20.84	25.30							6.65	70.86	"	
15—16	18.21								51.00	2276	
	19.43										
15.85	19.24							0.90	53.89	"	
	*						§			2277	
							51.44	0.55	51.44	"	
										2278	
	†						50.68	0.25	50.68	"	
2.47—4.12	3—5				20—25					2279	
3.00	3.64		18.80	6.50	25.30	18.80		11.00	32.83	"	
					13—16					2280	
0.39	0.48		7.43	7.90	15.33	7.43		13.90	11.87	"	
					+					2281	
0.21	0.26		6.90	22.50	29.40	6.90		4.15	15.05	64.18 per cent phosphate and up to guarantee.	
4.12—5.77	5—7				12—15					2282	
6.57	7.97	0.58	12.30	3.12	16.00	12.88		4.85	37.50	Up to guarantee.	
2.47—3.29	3—4				8—10		5—7			2283	
3.02	3.67	2.08	7.15	1.97	11.20	9.23	6.75	13.95	27.97	"	
2.47—3.29	3—4				7—9		4—5			2284	
3.21	3.89	2.45	7.28	2.02	11.75	9.73	5.10	14.80	27.57	"	
2.89—4.12	3½—5				8—10		3—4			2285	
3.28	3.98	2.30	7.43	2.12	11.85	9.73	3.50	15.00	26.22	"	
4.12—5.77	5—7				9—10		5—7			2286	
4.70	5.83	2.20	6.45	1.50	10.15	8.65	7.20	13.75	33.36	"	
1.65—2.47	2—3				9—10		6—8			2287	
2.51	3.54	2.15	7.15	2.10	11.40	9.30	7.49	13.50	27.10	"	
2.47—4.12	3—5				9—10		4—4½			2288	
3.36	4.08	6.02	0.28	4.80	11.10	6.30	4.25	11.50	24.65	"	

\* 95.12 per cent sulphate of potash. † 80.27 per cent muriate of potash. ‡ 65.72 per cent phosphate.  
§ 90 per cent as sulphate. || 80 per cent as muriate.



Date When Received.	Designation.	Number of Sample.	Name and Address of Manufacturer.	By Whom Sent.	From what Materials Produced.	—
1909.						
Feb. 3	Fertilizer. ....	2289	Davies, Ltd., Montreal.	Manufacturers..	Blood, bone and proteid matter.	Guaranteed contents Contents as found...
" 10	Thomas Phosphate Powder (ground basic slag).	2290	Late H. & E. Albert, England.	Anglo-Canadian Chem. Co., St. John, N.B.		Guaranteed contents Contents as found...
" 10	"	2291	"	"		Guaranteed contents Contents as found...
" 10	Albert's Horticultural Manure.	2292	Late H. & E. Albert, Biebrich, Germany.	"		Guaranteed contents Contents as found...
" 10	Potato Fertilizer No. 1.	2293	Late H. & E. Albert, England.	"		Guaranteed contents Contents as found...
" 17	Nitrate of Soda..	2294	The Nitrate Agencies Co., Toronto	The Nitrate Agencies Co., Toronto.		Guaranteed contents Contents as found...
" 17	Basic Slag ....	2295	Anglo Continental Guano Works (late Ohlendorff's)	H. H. McNutt, Lower Truro, N.S.		Guaranteed contents Contents as found...
" 17	No. 1 Superphosphate.	2296	Capelton Chemical & Fertilizer Co., Buckingham, P.Q.	Capelton Chem. and Fert. Co., Buckingham, P.Q.	Acidulated phosphate rock, tankage, sulphate of ammonia, sulphate and muriate of potash.	Guaranteed contents Contents as found...
" 17	Royal Canadian.	2297	"	"	"	Guaranteed contents Contents as found...
" 17	Reliance .....	2298	"	"	"	Guaranteed contents Contents as found...
" 17	Victor .....	2299	"	"	"	Guaranteed contents Contents as found...
" 17	Swift's Lowell Cereal Fertilizer.	2300	Swift's Lowell Fert. Co., Boston	Manufacturers..	Blood, meat, bone, bone black, bone phosphate, nitrate of soda or ammonia sulphate and sulphate or muriate of potash.	Guaranteed contents Contents as found...
" 17	Swift's Lowell Empress Brand	2301	"	"	"	Guaranteed contents Contents as found...
" 17	Swift's Lowell Bone Fertilizer	2302	"	"	"	Guaranteed contents Contents as found...
" 17	Swift's Lowell Animal Brand.	2303	"	"	"	Guaranteed contents Contents as found...
" 17	Swift's Lowell Potato Manure	2304	"	"	"	Guaranteed contents Contents as found...
" 17	Swift's Lowell Potato Phosphate.	2305	"	"	"	Guaranteed contents Contents as found...



SESSIONAL PAPER No. 14  
STANDARD FERTILIZERS.

RESULTS OF ANALYSIS.												Remarks and Opinion of the Chief Analyst.
Nitrogen, p.c.		Phosphoric Acid, per cent.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.	Number of Sample.		
Total, includ- ing that of Nitric Acid or Ammonia if Present.	Total, calcu- lated as Am- monia.	Soluble in Water.	Citric Soluble.	Insoluble.	Total.	Total avail- able						
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	\$ c.			
6.20	7.53				13.47			3.54		2289		
6.26	7.60	0.20	9.35	2.50	12.05	9.55		3.80	32.56		Slightly below guarantee in	
					17—20					2290	phosphoric acid.	
			13.40	4.10	17.50	13.40		0.15	15.97		Up to guarantee.	
					14—16					2291		
			11.15	4.30	15.45	11.15			13.55		"	
12.20	14.81	11.11					15.00		69.81	2292		
11.82	14.35	11.80	None.	None.	11.80	11.80	13.62	2.75	67.97		Essentially up to guarantee.	
2.00	2.43	7.00	*				7.00		22.20	2293		
3.46	4.20	6.58	1.52	0.60	8.70	8.10	6.05	10.50	27.56		Up to guarantee.	
N, NO <sub>3</sub> = 95.12								3.40		2294		
16.07	19.52							1.20	54.64		97.56 per cent nitrate of	
			16.50		17.95	†				2295	soda. Up to guarantee.	
			13.25	4.65	17.90	13.25		0.15	15.97		Up to guarantee in total	
					10—14					2296	phosphoric acid.	
		10.05	2.58	1.87	14.50	12.63		8.75	15.46		Up to guarantee.	
3.29—4.11	4—5				9—11		5—6			2297		
4.12	5.00	9.65	0.17	1.30	11.12	9.82	6.27	10.15	32.44		"	
1.65—2.47	2—3				6—7		2.3			2298		
2.77	3.66	5.00	3.45	1.17	9.62	8.45	2.89	5.40	22.45		"	
1.65—2.47	2—3				7.9		3—4			2299		
2.69	3.26	6.25	1.12	1.35	9.12	7.77	3.70	6.20	21.98		"	
0.82	1			1	8	7	1		11.79	2300		
1.22	1.48	5.78	2.50	0.92	9.20	8.28	1.32	6.90	15.43		"	
1.24	1.5			1	8	7	2		14.22	2301		
1.19	1.45	6.60	1.95	0.75	9.30	8.55	2.31	6.11	16.65		"	
1.65	2				9	8	3		17.71	2302		
1.41	1.71	5.68	3.10	1.42	10.20	8.78	3.25	8.65	18.70			
2.47	3				10	8	4		21.80	2303	"	
2.32	2.80	6.50	2.16	1.04	9.70	8.66	4.51	8.25	22.89		"	
1.65	2				8	7	4		17.61	2304	"	
1.61	1.95	4.75	2.60	0.80	8.15	7.35	4.24	6.85	18.51		"	
2.47	3				9	8	6		23.50	2305	"	
2.25	2.74	6.45	2.33	1.12	9.90	8.78	6.15	8.40	24.44			

\* Soluble. † Fineness, 89.90  
14-5



Date When Received.	Designation.	Number of Sample.	Name and Address of Manufacturer.	By Whom Sent.	From what Materials Produced.	
1909.						
Feb. 17	Swift's Potato Grower.	2306	Swift's Lowell Fert.Co., Boston.	Manufacturers.	Blood, meat, boneblack, bone phosphate, nitrate of soda, or sulphate of ammonia and sulphate or muriate of potash.	Guaranteed contents Contents as found..
" 17	Swift's Superior Fertilizer.	2307	" ..	" ..	" ..	Guaranteed contents Contents as found..
" 17	Swift's Lowell Ground Bone.	2308	" ..	" ..	" ..	Guaranteed contents Contents as found...
" 17	Essex X X X Fish and Pot-ash.	2309	Essex Fertilizer Boston.	" ..	Fish, meat, bone, boneback, bone phosphates, sodium nitrate or sulphate of ammonia, and sulphate or muriate of potash.	Guaranteed contents Contents as found...
" 17	Essex Market Garden and Potato Manure.	2310	" ..	" ..	" ..	Guaranteed contents Contents as found...
" 17	Essex Complete Manure for Potatoes, Roots & Vegetables.	2311	" ..	" ..	" ..	Guaranteed contents Contents as found...
" 17	Essex Ground Bone.	2312	" ..	" ..	.....	Guaranteed contents Contents as found...
" 17	New England Peerless Fertilizer.	2313	New England Fert. Co., Boston.	" ..	Blood, meat, bone boneblack, bone phosphate, sodium, nitrate or sulphate of ammonia, and sulphate or muriate of potash.	Guaranteed contents Contents as found...
" 17	N. E. Potato Fertilizer.	2314	" ..	" ..	" ..	Guaranteed contents Contents as found..
" 17	N. E. Corn and Grain fertilizer.	2315	N. E. Fertilizer Co.	" ..	" ..	Guaranteed contents Contents as found...
" 17	N. E. Potato Grower.	2316	" ..	" ..	" ..	Guaranteed contents Contents as found...
" 17	N. E. Ground Bone.	2317	" ..	" ..	.....	Guaranteed contents Contents as found...
" 18	Bradley's X L Super phosphate of Lime.	2318	Am. Agr. Chem. Co.	Boston Sales Dept.	Bone black, animal bone, phosphatic guano, dried fish, meat or blood, nitrate of soda or sulphate of ammonia, sulphate and or muriate of potash, sulphuric acid.	Guaranteed contents Contents as found..
" 18	Bradley's Potato Fertilizer.	2319	" ..	" ..	" ..	Guaranteed contents Contents as found..
" 18	Bradley's Eclipse Phosphate for all Crops.	2320	" ..	" ..	" ..	Guaranteed contents Contents as found..



SESSIONAL PAPER No. 14

## STANDARD FERTILIZERS.

RESULTS OF ANALYSIS.												Remarks and Opinion of the Chief Analyst.
Nitrogen, p.c.		Phosphoric Acid, per cent.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.	Number of Sample.		
Total, including that of Nitric Acid or Ammonia if Present.	Total, calculated as Ammonia.	Soluble in Water.	Citric Soluble.	Insoluble.	Total.	Total available.						
p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	\$ c.			
3.29	4	...	...	...	7	6	10	...	28 09	2306	Up to guarantee.	
3.50	4.25	4.20	2.05	0.75	7.00	6.25	10.36	7.60	29 78	....		
3.71	4.5	...	...	1	8	7	10	...	30 61	2307	"	
3.63	4.40	5.60	2.16	0.82	8.58	7.76	9.58	9.05	31 26	....		
2.47	3	...	...	...	25	...	...	...	...	2308	"	
2.55	3.09	...	20.00	7.45	27.45	20.00	...	4.40	32 90	....		
2.06	2.50	...	8	1	9	...	3	...	19 10	2309	"	
1.78	2.16	5.75	3.20	1.00	9.95	8.95	2.99	8.25	19 76	....		
2.06	2.50	8	...	1	9	...	5	...	21 90	2310	"	
1.92	2.33	6.55	1.85	0.80	9.10	8.30	4.87	7.50	21 53	....		
3.29	4	6	...	1	7	...	10	...	28 69	2311	"	
3.39	4.11	3.85	2.08	0.77	6.70	5.93	10.27	6.85	28 93	....		
2.47	3	...	...	...	23.00	10	...	...	23 30	2312	"	
2.52	3.06	...	19.45	8.05	27.50	19.45	...	4.25	32 38	....		
0.82	1	...	...	1	8	7	1	...	11 79	2313	"	
0.99	1.20	4.35	2.80	0.95	8.10	7.15	1.11	5.00	13 06	....		
1.65	2	...	...	...	8	7	4	...	17 61	2314	"	
1.57	1.80	4.90	3.18	0.77	8.85	8.08	4.36	6.60	19 31	....		
1.24	1.5	...	...	...	8	7	2	...	14 22	2315	"	
0.99	1.21	4.30	3.00	0.55	7.85	7.30	1.96	4.65	13 95	....		
2.47	3	...	...	...	7	6	10	...	25 30	2316	"	
2.44	3.03	5.35	2.70	1.15	9.20	8.05	11.51	6.90	29 54	....		
2.47	3	...	...	...	23	...	...	...	...	2317	"	
2.45	2.98	...	19.25	8.15	27.40	19.25	...	4.25	31 25	....		
2.06—2.88	2.5—3.5	5—6	3—4	2—3	10—13	8—10	1.5—2.5	...	18 40	2318	"	
2.13	2.58	6.75	3.45	2.25	12.45	10.20	1.60	11.25	21 41	....		
2.06—2.88	2.5—3.5	5—6	3—4	2—3	10—12	8—10	3—4	...	19 90	2319	"	
1.91	2.34	7.10	3.55	2.35	13.00	10.65	2.77	13.90	22 39	....		
1.03—2.50	1.25—3	6—8	2—4	2—3	10—15	8—12	2—3	...	15 50	2320	"	
1.55	1.88	7.25	2.85	2.65	12.75	10.10	2.72	11.15	20 62	....		



1 GEORGE V., A. 1911  
BULLETIN No. 182—

Date When Received.	Designation.	Number of Sample.	Name and Address of Manufacturer.	By Whom Sent.	From what Materials Produced.	—
1909.						
Feb. 18	Bradley's Complete Manure with 10 per cent Potash.	2321	Amer. Agr. Chem. Co.	Boston Sales Dept.	Bone, bone black, animal bone, phosphatic guano, dried fish, meat or blood, nitrate of soda or sulphate of ammonia, sulphate and or nitrate of potash, and sulphuric acid.	Guaranteed contents Contents as found...
" 18	Bradley's Eureka Fertilizer.	2322	"	"	"	Guaranteed contents Contents as found...
" 18	Bradley's Farmers' New Method Fertilizer.	2323	"	"	"	Guaranteed contents Contents as found...
" 18	Bradley's High Grade Fertilizer with 10 per cent Potash.	2324	"	"	"	Guaranteed contents Contents as found...
" 18	Read's Practical Special.	2325	"	"	"	Guaranteed contents Contents as found...
" 18	Read's Potato Manure.	2326	"	"	"	Guaranteed contents Contents as found...
" 18	Read's High Grade Farmers Friend Superphosphate.	2327	"	"	"	Guaranteed contents Contents as found...
" 18	Read's Fish Bone Potash.	2328	"	"	"	Guaranteed contents Contents as found...
" 18	Quinnipiac Climax Phosphate for all Crops.	2329	"	"	"	Guaranteed contents Contents as found...
" 18	Soluble Pacific Guano.	2330	"	"	"	Guaranteed contents Contents as found...
" 18	Pacific Potato Special.	2331	"	"	"	Guaranteed contents Contents as found...
" 18	Pacific Nobisque.	2332	"	"	"	Guaranteed contents Contents as found...
" 18	Standard Fertilizer.	2333	"	"	"	Guaranteed contents Contents as found...
" 18	Clark's Cove Great Planet Manure.	2334	"	"	"	Guaranteed contents Contents as found...
" 18	Cumberland's potato Fertilizer.	2335	"	"	"	Guaranteed contents Contents as found...
" 18	Darling's Blood, Bone & Potash.	2336	"	"	"	Guaranteed contents Contents as found...
" 18	Tucker's Imperial Bone Superphosphate for All Crops.	2337	"	"	"	Guaranteed contents Contents as found...



## SESSIONAL PAPER No. 14

## STANDARD FERTILIZERS.

RESULTS OF ANALYSES.											
Nitrogen, p.c.		Phosphoric Acid, per cent.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.	Number of Sample.	Remarks and Opinion of the Chief Analyst.
Total, including that of Nitric Acid or Ammonia if Present.	Total, calculated as Ammonia.	Soluble in Water.	Citric Soluble.	Insoluble.	Total.	Total available.					
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	\$ c.		
3.5—4.13 3.28	4—5 3.98	4—6 5.80	2—4 2.00	1—2 1.50	7—10 9.30	6—8 7.80	10—12 9.17	.... 8.85	29 20 29 93	2321	Up to guarantee.
1.03—2.5 1.61	1.25—3 1.95	6—8 7.00	2—4 2.43	2—3 2.92	10—15 12.35	8—12 9.43	2—3 2.37	.... 10.35	15 50 19 79	2322	"
1.03—2.5 1.57	1.25—3 1.80	6—8 7.15	2—4 2.73	2—3 2.62	10—15 12.50	8—12 9.88	2—3 2.40	.... 10.60	15 50 20 11	2323	"
2.4—3 1.92	3—4 2.33	5—6 3.50	1—2 3.43	1—2 3.92	7—10 10.85	6—8 6.93	10—12 9.39	.... 9.55	25 56 25 07	2324	"
0.82—1.65 1.09	1—2 1.19	2—3 6.00	2—3 2.63	1—2 2.12	5 8 10.75	4—6 8.63	8—10 7.39	.... 13.00	15 69 21 82	2325	"
2.4—3 1.92	3—4 2.33	5—6 3.40	1—2 3.23	1—2 3.67	7—10 10.30	6—8 6.63	10—12 9.97	.... 9.55	25 56 25 23	2326	"
3.5—4.13 3.28	4—5 3.98	4—6 5.85	2—4 2.08	1—2 1.22	7—10 9.15	6—8 7.93	10—12 9.07	.... 9.25	29 20 29 90	2327	"
2—3 1.69	2.4—3.6 2.06	3—4 5.20	1—2 2.88	1—2 2.57	5—7 10.65	4 6 8.08	4—6 4.11	.... 12.75	15 80 20 03	2328	"
1.03—2.50 1.67	1.25—3 2.02	6—8 7.05	2—4 2.90	2—3 2.90	10—15 12.85	8—12 9.95	2—3 2.32	.... 10.20	15 50 20 52	2329	"
2.06—2.88 1.86	2.5—3.5 2.26	5—6 6.70	3—4 3.38	2—3 2.02	10—13 12.10	8—10 10.08	1.5—2.5 1.55	.... 11.50	18 40 20 24	2330	"
2.06—2.88 1.95	2.5—3.5 2.36	5—6 7.40	3—4 3.08	2—3 2.22	10—13 12.70	8—10 10.48	3—4 2.78	.... 13.75	19 90 22 34	2331	"
1.03—2.15 1.68	1.25—3 2.04	6—8 7.30	2—4 2.98	2—3 3.07	10—15 13.35	8—12 10.28	2—3 2.29	.... 10.35	15 50 20 96	2332	"
2.06—2.88 1.83	2.5—3.5 2.23	5—6 6.70	3—4 3.38	2—3 2.17	10—13 12.25	8—10 10.08	1.5—2.5 1.54	.... 11.70	18 40 20 17	2333	"
3.3—4.12 3.14	4—5 3.81	6—8 7.50	2—3 2.48	1—2 1.32	9—13 11.30	8—11 9.98	7—8 6.48	.... 12.80	27 92 29 28	2334	"
2.06—2.88 1.86	2.5—3.5 2.26	5—6 7.10	3—4 3.25	2—3 2.55	10—13 12.90	8—10 10.35	3—4 2.72	.... 14.30	19 90 21 90	2335	"
4.10—5 4.20	5—6 5.40	5—7 5.30	2—3 3.55	1—2 1.30	8—12 10.15	7—10 8.85	7—8 6.54	.... 11.15	29 44 31 47	2336	"
1.03—2.50 1.58	1.25—3 1.92	6—8 7.05	2—4 2.75	2—3 3.00	10—15 12.80	8—12 9.80	2—3 2.41	.... 10.75	15 50 20 17	2337	"



Date When Received.	Designation.	Number of Sample.	Name and Address of Manufacturer.	By Whom Sent.	From what Materials Produced.	
Feb. 20.	Bradley's Superphosphate with Potash for Orchards.	2338	Amer. Agr. Chem. Co.	Boston Sales Dept.	Bone black and phosphatic guano, muriate and orsulphate of potash.	Guaranteed contents Contents as found...
" 20	Bradley's Alkaline Bone with Potash.	2339	" "	" "	" "	Guaranteed contents Contents as found...
" 20	Bradley's Fine Ground Bone.	2340	" "	" "	" "	Guaranteed contents Contents as found...
" 20	Pacific Fine Ground Bone.	2341	" "	" "	" "	Guaranteed contents Contents as found...
" 20.	Cumberland Fine Ground Bone.	2342	" "	" "	" "	Guaranteed contents Contents as found...
" 26.	Tankage..	2343	Montreal Stock Yards Co., Montreal.	Manufacturers..	Cattle blood, cattle and hogs' entrails, hogs' hair, hogs' toes, sheep and calves' entrails, sheep's heads, calves' heads, &c.	Guaranteed contents Contents as found...
" 2.	Tankage E.	2344	Harris Abattoir Co., Toronto.	"	Dried blood, bones, tankage, potash and mechanical filler.	Guaranteed contents Contents as found..
" 2.	Tankage F.....	2345	" "	" "	" "	Guaranteed contents Contents as found..
"	" G.....	2346	" "	" "	" "	Guaranteed contents Contents as found...
"	" H.....	2347	" "	" "	" "	Guaranteed contents Contents as found...
"	" I.....	2348	" "	" "	" "	Guaranteed contents Contents as found..
March 2	" J.....	2349	" "	" "	" "	Guaranteed contents Contents as found...
" 2	" K.....	2350	" "	" "	" "	Guaranteed contents Contents as found...
" 2.	Special Potash Mixture.	2351	Am. Agr. Chem. Co.	"	Animal matter, blood, bone and (tankage), mineral phosphates, potash, and all treated with sulphuric acid.	Guaranteed contents Contents as found...
" 2.	High Grade Perash Compound	2352	" "	" "	" "	Guaranteed contents Contents as found...
" 2.	Crocker's New York Special Phosphate.	2353	" "	" "	" "	Guaranteed contents Contents as found...
" 2.	Crocker's Wheat and Corn Fertilizer.	2354	" "	" "	" "	Guaranteed contents Contents as found..



SESSIONAL PAPER No. 14

## STANDARD FERTILIZERS.

RESULTS OF ANALYSIS.											
Nitrogen, p.c.		Phosphoric Acid, per cent.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.	Number of Sample.	Remarks and Opinion of the Chief Analyst.
Total, including that of Nitric Acid or Ammonia if present.	Total, calculated as Ammonia.	Soluble in Water.	Citric Soluble.	Insoluble.	Total.	Total available.					
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
0.25	0.31	10.80	1.85	2.05	15.18	13.15	1.13	12.65	15.90	2338	Up to guarantee.
				2.05	14.70	12.65			17.59		
0.21	0.25	6.7	5.6	2.82	12.15	11.13	2.3	12.15	15.00	2339	"
		10.00	2.98	2.82	15.80	12.98	1.80		18.63		
2.5-3.25	3-4				21-23					2340	"
2.75	3.32		16.15	8.05	24.20	16.15		6.65	29.53		
2.5-3.25	3-4				21-23					2341	"
2.79	3.35		17.65	6.65	24.30	17.65		6.65	30.90		
2.5-3.25	3-4				21-23					2342	"
2.84	3.45		16.95	7.25	24.20	16.95		6.75	30.48		
9.38	11.39				3.06			14.46		2343	"
9.38	11.39		2.60	0.45	3.05	2.60		6.75	34.89		
4.2	5.1				11.54		8			2344	"
3.68	4.47		11.75	1.20	12.95	11.75	8.65	7.40	34.45		
4.3	5.2				12.85		4			2345	Below guarantee in potash.
4.08	4.96		10.75	2.00	12.75	10.75	2.40	8.75	28.70		
5.4	6.6				11.00		5			2346	"
5.32	6.46		11.45	1.20	12.65	11.45	2.52	9.25	33.56		
3.08	3.74				10.79		6.5			2347	"
3.04	3.69		10.60	2.00	12.60	10.60	3.77	8.90	26.37		
1.84	2.23				12.32		5			2348	"
1.88	2.28		11.10	3.10	14.20	11.10	2.71	7.25	22.24		
2.41	2.93				14.38		3			2349	Up to guarantee.
2.32	2.82		13.73	2.27	16.00	13.73	3.06	7.25	26.73		
2.31	2.83				11.86		10			2350	Below guarantee in potash.
2.28	2.77		11.58	1.52	13.10	11.58	8.24	8.00	29.19		
0.82-1.65	1-2	7-8	2-3	1-2	10-13	9-11	7-8		20.69	2351	Up to guarantee.
1.18	1.43	7.30	1.13	3.27	11.70	8.43	8.15	5.40	23.15		
1.65-2.47	2-3	6.7	2-3	1-2	9-12	8-10	10-11		25.31	2352	"
1.58	1.92	7.15	1.08	2.02	10.25	8.23	10.79	9.90	26.54		
		8-9	2-3	1-2	11-14	10-12	8-9		20.10	2353	"
		7.65	2.25	1.25	11.15	9.90	7.76	6.00	19.79		
2.06-2.88	2.5-3.5	6-7	2-3	1-2	9-12	8-10	1.5-2.5		18.20	2354	"
2.16	2.62	6.35	2.98	1.77	11.10	9.33	1.78	12.30	20.55		



1 GEORGE V., A. 1911

BULLETIN No. 182—

Date When Received.	Designation.	Number of Sample.	Name and Address of Manufacturer.	By Whom Sent.	From what Materials Produced.	—
1909.						
Mar.	2 Crocker's Complete Manure.	2355	Am. Agr. Chem. Co.	Manufacturers..	Animal matter blood, bone and tankage, mineral phosphates, potash and all treated with sulphuric acid.	Guaranteed contents Contents as found...
"	2 Crocker's Special Potato Manure	2356	"	"	"	Guaranteed contents Contents as found...
"	2 Crocker's Best Potato Fertilizer.	2357	"	"	"	Guaranteed contents Contents as found...
"	2 Bradley's New Method Fertilizer.	2358	"	"	"	Guaranteed contents Contents as found...
"	2 Bradley's B. D. Sea Fowl Guano.	2359	"	"	"	Guaranteed contents Contents as found...
"	2 Bradley's Complete Manure for Potatoes & Vegetables.	2360	"	"	"	Guaranteed contents Contents as found...
"	2 Complete Manure.	2361	"	"	"	Guaranteed contents Contents as found...
"	2 Michigan Carbon Fruit and Vine Fertilizer.	2362	"	"	"	Guaranteed contents Contents as found...
"	2 Michigan Carbon Complete Fertilizer.	2363	"	"	"	Guaranteed contents Contents as found...
"	2 Michigan Carbon Defiance Fertilizer.	2364	"	"	"	Guaranteed contents Contents as found...
"	2 Homestead High Grade Garden and Vegetable Fertilizer.	2365	"	"	"	Guaranteed contents Contents as found...
"	2 Standard Bone & Potash Fertilizer.	2366	"	"	"	Guaranteed contents Contents as found...
"	2 Homestead Corn & Grain Producer.	2367	"	"	"	Guaranteed contents Contents as found...
"	2 Virginia Tobacco Fertilizer.	2368	"	"	"	Guaranteed contents Contents as found...
"	2 General Blood, Bone and Potash Fertilizer.	2369	"	"	"	Guaranteed contents Contents as found...
"	2 Best Potato and Garden Blood and Tankage Fertilizer.	2370	"	"	"	Guaranteed contents Contents as found...
"	3 Campbells Fertilizer. No. 1.	2371	The Executors of Robt. Campbell Esq., Manchester, Eng.	Blackie Bros., Halifax, N.S.	Bones, kainit. superphosphate rape meal, ammonium sulphite (sic).	Guaranteed contents Contents as found...
"	3 Fertilizer No. 2.	2372	"	"	Superphosphate, ammonium sulphite (sic), kainit.	Guaranteed contents Contents as found...



## SESSIONAL PAPER No. 14

## STANDARD FERTILIZERS.

RESULTS OF ANALYSIS.												Remarks and Opinion of the Chief Analyst.
Nitrogen, p. c.		Phosphoric Acid, per cent.						Potash.	Moisture.	Relative value per ton of 2,000 lbs.	Number of Sample.	
Total, includ- ing that of Nitric Acid or Ammonia if Present.	Total, calcu- lated as Am- monia.	Soluble in Water.	Citric Soluble.	Insoluble.	Total.	Total avail- able.						
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	\$ c.			
0.82—1.65 1.05	1—2 1.28	6—7 6.73	2—3 1.20	1—2 3.27	9—12 11.20	8—10 7.93	4—5 3.77	..... 11.15	16.49 17.72	2355 ....	Up to guarantee.	
3.29—4.11 3.19	4—5 3.88	6—7 4.85	2—3 4.18	1—2 1.67	9—12 10.70	8—10 9.03	7—8 7.53	..... 11.55	27.89 29.29	2356 ....		
1.65—2.47 1.65	2—3 2.01	6—7 7.48	2—3 1.27	1—2 1.90	9—12 10.65	8—10 8.75	10—11 10.30	..... 9.50	25.31 26.85	2357 ....	"	
0.82—1.65 1.09	1—2 1.33	6—7 7.48	2—5 1.80	1—2 2.22	9—12 11.50	8—10 9.28	2—3 2.13	..... 7.80	14.49 17.46	2358 ....		
2.06—2.88 2.13	2.5—3.5 2.58	6—7 6.45	2—3 3.01	1—2 1.87	9—12 11.33	8—10 9.46	1.5—2.5 1.63	..... 11.65	18.20 20.48	2359 ....	"	
3.29—4.11 3.26	4—5 3.96	6—7 4.85	2—3 4.50	1—2 1.60	9—12 10.95	8—10 9.35	7—8 7.51	..... 11.00	27.89 29.84	2360 ....		
2.06—2.88 1.82	2.5—3.5 2.21	6—7 5.25	2—3 3.88	1—2 1.65	9—12 10.78	8—10 9.13	3—4 3.59	..... 8.40	19.70 20.84	2361 ....	"	
1.65—2.47 1.57	2—3 1.90	6—7 6.75	2—3 2.23	1—2 1.87	9—12 10.85	8—10 8.98	10—11 10.92	..... 9.25	25.31 27.37	2362 ....		
1.65—2.47 1.83	2—3 2.23	6—7 6.45	2—3 2.56	1—2 1.72	9—12 10.73	8—10 9.01	4—5 4.49	..... 12.15	19.31 21.78	2363 ....	"	
1.65—2.47 1.86	2—3 2.26	6—7 8.15	2—3 1.25	1—2 2.35	9—12 11.75	8—10 9.40	2—3 2.16	..... 12.40	17.31 19.34	2364 ....		
1.65—2.47 1.60	2—3 1.94	6—7 7.40	2—3 0.95	1—2 2.20	9—12 10.55	8—10 8.35	6—7 6.95	..... 11.00	21.31 22.97	2365 ....	"	
1.65—2.47 1.78	2—3 2.16	6—7 6.50	2—3 3.18	1—2 1.77	9—12 11.45	8—10 9.68	4—5 4.28	..... 12.00	19.31 22.16	2366 ....		
1.65—2.47 1.95	2—3 2.36	6—7 7.80	2—3 1.46	1—2 2.42	9—12 11.68	8—10 9.26	2—3 2.25	..... 12.25	17.31 20.57	2367 ....	"	
1.65—2.47 1.82	2—3 2.21	6—7 5.95	2—3 2.68	1—2 1.72	9—12 10.35	8—10 8.63	4—5 4.23	..... 13.00	19.31 21.02	2368 ....		
1.65—2.47 1.61	2—3 1.95	6—7 7.05	2—3 2.03	1—2 1.77	9—12 10.85	8—10 9.08	10—11 10.10	..... 10.40	25.31 26.80	2369 ....	"	
1.65—2.47 1.61	2—3 1.95	6—7 7.30	2—3 1.98	1—2 2.15	9—12 11.43	8—10 9.28	6—7 7.39	..... 9.50	21.31 24.45	2370 ....		
4.59 4.90	5.57 5.95	* 3.95	..... 2.48	..... 1.05	..... 7.48	..... 6.43	5.75 4.26	..... 6.90	..... 28.80	2371 ....	"	
3.43 4.02	4.17 4.88	** 7.60	..... 0.82	..... 0.48	..... 8.90	..... 8.42	8.00 3.77	..... 9.15	..... 27.60	2372 ....		

7.5 p. c. sol. phosphate.

† 7.5 p. c. phosphate.

‡ Sulphate.

\*\* 13 p. c. phosphate.



Date When Received.	Designation.	Number of Samples.	Name and Address of Manufacturer.	By Whom Sent.	From what Materials Produced.	
1909.						
Mar.	3 Special Potato Manure.	2373	Alex Cross & Sons, Ltd., Glasgow, Scotland.	R. A. Beckwith, Amherst, N.-E.	Bone phosphate, nitrates and muriate of potash.	Guaranteed contents Contents as found. . .
"	3 Scotia Basic Slag Phosphate.	2374	"	"	"	Guaranteed contents Contents as found. . .
"	5 Bone Dust . . . . .	2375	"	Rufus R. Gage, Hamilton, Ont.	Bone. . . . .	Guaranteed contents Contents as found. . .
"	5 Great Eastern High Grade Potato Manure	2376	Am. Agr. Chem. Co., G. Eastern Fertilizer Branch	Manufacturers. .	Bone, black, animal bone, phosphatic guanos, dried fish, meat or blood, sod, nitrate or sulphate of ammonia, sulphate and or muriate of potash, sulphuric acid.	Guaranteed contents Contents as found. . .
"	5 G. E. Potato Manure.	2377	"	"	"	Guaranteed contents Contents as found. . .
"	5 G. E. General Fertilizer.	2378	"	"	"	Guaranteed contents Contents as found. . .
"	5 G. E. Grass and Oats Fertilizer	2379	"	"	Bone black, and or phosphatic guanos, muriate and or sulphate of potash.	Guaranteed contents Contents as found. . .
"	5 Aroostook Complete Manure.	2380	"	"	Bone black, animal bone, phosphatic guanos, dried fish, meat or blood, soda, nitrate or sulphate of ammonia, sulphate and or muriate of potash, sulphuric acid.	Guaranteed contents Contents as found. . .
"	5 Peerless Potato Manure.	2381	"	"	"	Guaranteed content Contents as found. . .



SESSIONAL PAPER No. 14

STANDARD FERTILIZERS.

RESULTS OF ANALYSIS.												Remarks and Opinion of the Chief Analyst.
Nitrogen, p.c.		Phosphoric Acid, per cent.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.	Number of Sample.		
Total, includ- ing that of Nitric Acid or Ammonia if Present.	Total, calcu- ated as Am- monia.	Soluble in water.	Citric Soluble.	Insoluble.	Total.	Total avail- able.						
p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	\$ cts.			
2.88—4.11 3.64	3.5—5 4.42	7.85	3.60	1.55	13.00	11.45	6.9 5.78	1.90	32.20	2373	Up to guarantee.	
.....	.....	.....	.....	.....	16—20	.....	.....	.....	.....	2374		
.....	.....	.....	15.18	6.62	21.80	15.18	.....	0.20	18.68	.....	"	
2.47	3	.....	.....	.....	23	.....	.....	.....	.....	2375	"	
2.70	3.28	.....	17.75	6.25	24.00	17.75	.....	3.50	29.58	.....	"	
3.20—4.15 3.39	4—5 4.11	4.6 6.45	2—4 1.98	1—2 1.20	7—10 9.63	6—8 8.43	10—12 8.90	..... 8.15	28.18 30.70	2376	"	
2.06—2.88 2.04	2.5—3.5 2.48	5—6 7.70	3—4 4.06	2—3 1.37	10—13 13.13	8—10 11.76	3—4 3.09	..... 11.40	19.90 24.14	2377	"	
0.82—1.65 1.12	1—2 1.36	5—7 6.63	3—4 3.35	2—3 2.30	10—14 12.28	8—11 9.98	4—5 3.49	..... 11.10	16.69 19.62	2378	"	
.....	.....	6—7	5—6	1—2	12—15	11—13	2—3	.....	15.00	2379	"	
.....	.....	10.33	3.43	2.07	15.83	13.76	1.76	12.15	18.55	.....	"	
2.4—3 2.38	3—4 2.89	5—6 3.67	1—2 3.39	1—2 3.54	5—10 10.60	6—8 7.06	10—12 9.21	..... 8.50	25.56 26.50	2380	"	
3.3—4.12 3.16	4—5 3.84	6—8 7.40	2—3 3.85	1—2 1.50	9—13 12.75	8—11 11.25	7—8 6.27	..... 11.35	27.92 30.58	2381	.....	

† 4—6 p.c. insol. bone phosphate.      †† 15—18 Sol. phosphate.



Date When Received.	Designation.	Number of Samples.	Name and Address of Manufacturer.	By whom Sent.	From what materials Produced.	—
1909.						
Mar. 9	Special Potato Phosphate.	2382	Nova Scotia Fertilizer Co., Halifax.	Manufacturers.	Bone, char. bone, dried blood, tankage, meat, fish bone, phosphates, sulphate of ammonia, sodium nitrate, high grade muriate of potash or sulphate of potash and sulphuric acid.	Guaranteed contents Contents as found...
" 9	Basic Slag.....	2383	" ..	" ..	.....	Guaranteed contents Contents as found...
" 9	Potato Phosphate.	2384	" ..	" ..	Bone, char. bone, dried blood, tankage, meat, fish bone, phosphates, am. sulph. sodium nitrate, high grade muriate of potash or sulphate of potash and sulphuric acid.	Guaranteed contents Contents as found...
" 9	Ceres Superphosphate.	2385	" ..	" ..	" ..	Guaranteed contents Contents as found.
" 9	10 p.c. Potato Phosphate.	2386	" ..	" ..	" ..	Guaranteed contents Contents as found...
" 9	Pure Ground Bone Meal.	2387	" ..	" ..	Bone .....	Guaranteed contents Contents as found...
" 9	Blood, Bone and Potash.	2388	" ..	" ..	Bone, dried blood, tankage bone phosphates, sulphate of ammonia, nitrate of soda, high grade, muriate of potash or sulphate of potash and sulphuric acid.	Guaranteed contents Contents as found...
" 9	Bilston Basic Phosphate.	2389	Alfred Hickman & Co., Bilston, Ang.	E. E. McNutt, Truro, N.S.	.....	Guaranteed contents Contents as found...
" 9	Fertilizer A....	2390	Victoria Chem. Co. Ltd., Victoria, B.C.	Manufacturers.	Nitrate of soda, muriate of potash and superphosphates.	Guaranteed contents Contents as found...
" 22	" B....	2391	" ..	" ..	Nitrate of soda, muriate of potash and superphosphates of lime.	Guaranteed contents Contents as found...



## SESSIONAL PAPER No. 14

## STANDARD FERTILIZERS.

RESULTS OF ANALYSIS.												Remarks and Opinion. of the Chief Analyst.
Nitrogen, p.c.		Phosphoric, Acid, per cent.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.	Number of Sample.		
Total, includ- ing that of Nitric Acid or Ammonia if Present.	Total, calcu- lated as Am- monia.	Soluble in Water.	Citric soluble.	Insoluble.	Total.	Total avail- able						
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	\$ cts.			
2.06—2.47 2.10	2.5—3 2.55	6.65	2.35	2—3 0.70	8—11 9.70	6—8 9.00	7—9 10.16	10.15	21 20 28 07	2382	Up to guarantee.	
					14—16					2383		
1.65—2.47 2.38	2—3 2.89	7.90	1.64	4.75 2—3 0.84	18.55 9—12 10.38	13.80 7—9 9.54	4—5 7.35	0.25 9.25	16 60 17 91 26 98	2384		
1.65—2.47 2.27	2.3 2.75	6.70	1.84	2—3 0.76	9—12 9.30	7.9 8.54	2—3 3.02	9.15	15 91 21 03	2385		
2.06—2.47 1.64	2.5—3 1.99	7.30	1.55	2—3 0.80	8—11 9.65	6—8 8.85	10—12 12.91	12.10	24 20 29 19	2386		
2.47—3.06 4.09	3—4 4.96		17.82	7.28	25.10	17.82		7.75	35 60	2387		
1.65—2.47 2.07	2—3 2.48	6.25	1.81	2.3 0.64	8—11 8.70	6—8 8.06	4—5 6.23	9.45	16 81 22 95	2388	54.8 p.c. phosphate. Up to guarantee.	
											Up to guarantee.	

† 17.46 Soluable.

‡ 50—60 Bone phosphate.

\* Fine Meal, 89 per cent..



Date When Received	Designation.	Number of Sample.	Name and Address of Manufacturer.	By Whom Sent.	From what Materials Produced.	
1909.						
Mar. 22.	Fertilizer C....	2392	Victoria Chem. Co., Victoria, B.C.	Manufacturers..	Muriate of pot-ash and super-phosphate of lime.	Guaranteed contents Contents as found...
" 22.	" D....	2393	" ..	" ..	Nitrate of soda, muriate of pot-ash and super-phosphate of lime.	Guaranteed contents Contents as found...
" 22.	Superphosphate of Lime.	2394	" ..	" ..	Bone char. and sulphuric acid.	Guaranteed contents Contents as found...
" 22.	Nitrate of Soda.	2395	" ..	" ..	Imported from Chili.	Guaranteed contents Contents as found...
" 22.	Sulphate of Pot-ash.	2396	" ..	" ..	Imported from Germany.	Guaranteed contents Contents as found...
" 22.	Muriate of Pot-ash.	2397	" ..	" ..	Imported from Germany.	Guaranteed contents Contents as found...
" 23.	Bone Meal.....	2398	Prov.Ch.Fertilizer Co., St. John, N.B.	" ..	.....	Guaranteed contents Contents as found...
" 23.	10 p.c. Aroostock Potato.	2399	" ..	" ..	.....	Guaranteed contents Contents as found...
" 23.	*4 p.c. Potato...	2400	" ..	" ..	.....	Guaranteed contents Contents as found...
" 23.	†Special Potato.	2401	" ..	" ..	.....	Guaranteed contents Contents as found...
" 23.	Potato Grower..	2402	" ..	" ..	.....	Guaranteed contents Contents as found...
" 23.	Imperial Super-phosphate.	2403	" ..	" ..	.....	Guaranteed contents Contents as found...
" 23.	Victor Guano...	2404	" ..	" ..	.....	Guaranteed contents Contents as found...
" 23.	Fertilizer H...	2405	W. Harris & Co., Toronto.	" ..	Flesh, blood and bone.	Guaranteed contents Contents as found...
April 2.	Stockbridge Special Complete Manure for Potatoes & Vegetables.	2406	Bowker Fertilizer Co., Boston.	" ..	Bone, bone black, phosphatic guana, bone, phosphate, dried blood, meat or fish, ammonia, sulphate or sodium, nit. pot., sulph. or pot., mur. and sulphuric acid.	Guaranteed contents Contents as found...
" 2.	Bowker's Blood, Bone and Pot-ash.	2407	" ..	" ..	" ..	Guaranteed contents Contents as found...
" 2.	Bowker's Early Potato Manure	2408	" ..	" ..	" ..	Guaranteed contents Contents as found...
" 2.	Bowker's Market Garden Fertilizer.	2409	" ..	" ..	" ..	Guaranteed contents Contents as found...

\* Is labelled with the word *Potato* only.      † Is labelled 6 p.c., but am uncertain to which ingredient this refers.



SESSIONAL PAPER No. 14

## STANDARD FERTILIZERS.

RESULTS OF ANALYSIS.												Remarks and Opinion of the Chief Analyst.
Nitrogen, p. c.		Phosphoric Acid, per cent.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.	Number of Sample.		
Total, including that of Nitric Acid or Ammonia if Present.	Total, calculated as Ammonia.	Soluble in Water.	Citric Soluble.	Insoluble.	Total.	Total available.						
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	\$ cts.			
0.39	0.48	11.83	2.65	0.98	12.5 15.46	14.48	11.00 11.78	12.40	30.51	2392	Up to guarantee.	
2.50	3.04				10.00		11.00			2393		
2.53	3.07	10.01	2.00	0.68	12.69	12.01	11.30	12.60	34.31			
					16.00					2394	"	
0.52	0.63	15.85	0.28	0.62	16.75	16.13		12.60	21.28			
15.5	18.82								52.70	2395		
16.02	19.45							7.10	54.47		"	
							50		50.00	2396	"	
							53.62	0.35	53.62		"	
							50		50.00	2397	"	
							49.22	2.80	49.22		"	
3.21	3.90				23.40					2398	"	
3.99	4.85		18.77	4.28	23.05	18.77		9.15	35.50			
3.17	3.84				7.97		9.28			2399		
3.37	4.10	6.65	0.48	0.42	7.55	7.13	10.71	8.65	30.80		"	
2.45	2.98				7.80		4.78			2400	Slightly below guarantee.	
1.80	2.31	3.75	3.21	0.99	7.95	6.96	5.23	6.00	19.68			
2.69	3.27				8.78		6.20			2401		
2.49	3.03	6.80	1.35	0.70	8.85	8.15	6.71	11.65	25.03		Up to guarantee.	
3.22	3.91				6.10		9.76			2402	"	
2.63	3.20	2.55	2.93	0.62	6.10	5.48	13.15	7.40	28.51			
							12.87					
2.97	3.61				8.50		2.53			2403	"	
2.80	3.40	6.75	0.64	7.85	7.85	7.39	2.37	15.15	18.70			
2.03	2.47				6.70		3.90			2404		
1.83	2.23	3.55	3.42	0.96	7.93	6.97	3.59	8.25	18.12		"	
6.63	8.05				5 1/2 - 6					2405	"	
7.78	9.45	Trace	6.26	1.52	7.78	6.26		6.50	33.69			
3.30	4				7	6	10		28.12	2406		
3.50	4.25	5.90	1.96	1.19	9.05	7.86	8.90	9.25	30.39		"	
4.12	5				9	7	7		29.31	2407	"	
4.02	4.88	5.50	3.60	1.30	10.40	9.10	6.60	11.95	31.22			
3.30	4				9	8	7		27.32	2408	"	
3.12	3.79	7.40	3.03	1.32	11.75	10.43	6.47	13.40	29.69			
2.47	3				7	6	10		25.30	2409		
2.39	2.91	4.35	3.30	2.55	10.20	7.65	9.90	10.75	27.64		"	



1 GEORGE V., A. 1911  
BULLETIN No. 182—

Date When Received.	Designation.	Number of Sample.	Name and Address of Manufacturer.	By Whom Sent,	From what Materials Produced.	—
1909.						
Apr.	2 Bowker's Ver- mont Phos- phate.	2410	Bowker Fertilizer Co., Boston.	Manufacturers..	Bone, bone black, phosphatic gua- no, bone phos- phate, dried blood meat or fish, ammonia sulph. or sodi- um, nitrate sul- phate of Pot- ash or muriate of potash and sulphuric acid.	Guaranteed contents Contents as found...
"	2 Bowker's Potato and Vegetable Phosphate.	2411	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	2 Bowker's Corn Phosphate.	2412	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	2 Bowker's Square Brand Bone & Potash.	2413	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	2 Bowker's Farm & Garden Phos- phate.	2414	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	2 Bowker's 6 p.c. Potato Fertil- izer.	2415	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	2 Bowker's Sure Crop Phos- phate.	2416	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	2 Bowker's Potash Bone Phos- phate.	2417	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	2 Bowker's Super- phosphate with potash.	2418	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	2 Bowker's Plain Superphos- phate for Orch- ards.	2419	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	2 Fresh Ground Bone.	2420	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	2 Fresh Nitrate of Soda.	2421	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	2 Bowker's Muriate of Potash.	2422	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	2 Bowker's Dissol- ved Bone Black	2423	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	6 Griffiths Blood & Bone Fertilizer	2424	J. Y. Griffin & Co. Ltd., Winnipeg.	" ..	Blood, bone and rendering scrap	Guaranteed contents Contents as found...
"	8 Muriate of Pot- ash.	2425	The Nitrate Agen- cies Co., Toronto	" ..	" ..	Guaranteed contents Contents as found...
"	8 Sulphate of Pot- ash	2426	" ..	" ..	" ..	Guaranteed contents Contents as found...
"	8 Acid Phosphate.	2427	" ..	" ..	" ..	Guaranteed contents Contents as found...



## SESSIONAL PAPER No. 14

## STANDARD FERTILIZERS.

RESULTS OF ANALYSIS.											Remarks and Opinion of the Chief Aalyst.
Nitrogen, p.c.		Phosphoric Acid, per cent.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.	Number of Sample.	
Total, includ- ing that of Nitric Acid or Ammonia if Present.	Total, calcu- lated as Am- monia.	Soluble in Water.	Citric Soluble.	Insoluble.	Total.	Total avail- able.					
p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	\$ c.		
2.47	3				10	8	4		21 80	2410	
2.45	2.98	7.20	3.30	0.98	11.48	10.50	5.48	13.65	26 37	... Up to guarantee.	
1.65	2				9	8	2		16 71	2411	
1.86	2.26	6.93	2.70	2.92	12.55	9.63	2.04	10.90	20 53	.... "	
1.65	2				9	8	2		16 71	2412	
1.85	2.24	7.28	2.79	2.98	13.05	10.07	2.00	11.15	20 99	.... "	
1.65	2				7	6	2		14 51	2413	
1.85	2.24	6.20	3.65	3.35	13.20	9.85	1.95	10.05	20 70	... "	
1.65	2				9	8	2		16 71	2414	
1.96	2.38	6.95	3.18	3.02	13.15	10.13	2.08	11.05	19 41	.... "	
0.82	1				7	6	6		15 69	2415	
1.12	1.36	4.93	3.82	2.55	11.30	8.75	5.11	14.24	19 80	... "	
0.82	1				9	8	2		13 89	2416	
1.18	1.43	6.75	3.28	2.47	12.50	10.03	2.12	13.05	18 58	... "	
0.82	1				8	6	2		11 99	2417	
1.19	1.45	6.68	3.32	2.35	12.35	10.00	2.07	13.00	18 49	.... "	
.....	.....	.....	.....	.....	11	10	2	.....	13 30	2418	
.....	.....	8.55	4.40	2.30	15.25	12.95	1.75	15.00	17 54	... "	
.....	.....	.....	.....	.....	15	14	.....	.....	15 70	2419	
.....	.....	8.17	6.21	1.02	15.40	14.38	.....	14.90	16 94	.... "	
2.47	3				22.80					2420	
3.05	3.71		19.35	6.30	25.65	19.35		5.90	33 54	.... "	
15	18.21								51 00	2421	
15.46	18.76							1.85	52 56	.... "	
.....	.....						49.0		49 00	2422	
.....	.....						51.70	0.85	51 70	.... "	
.....	.....				16	15			16 80	2423	
.....	.....	14.30	1.28	1.77	17.35	15.58		8.50	19 10	... "	
.....	.....									2424	
6.75	8.19	Trace	9.23	2.22	11.45	9.23		5.50	33 76	.... No guarantee furnished	
.....	.....						51.10		51 10	2425	
.....	.....						50.41		50 41	... Up to guarantee.	
.....	.....						51.20		51 20	2426	
.....	.....						51.26		51 26	... "	
.....	.....			0.92	17.70	16.78			18 73	2427	
.....	.....	15.75	1.05	2.20	19.00	16.80			20 71	... "	



1 GEORGE V., A. 1911  
BULLETIN No. 182—

Date When Received.	Designation.	Number of Sample.	Name and Address of Manufacturer.	By Whom Sent.	From what Materials Produced.	
1909.						
April 21	Homestead Bone Black Fertilizer	2428	Am. Agr. Chem. Co., Michigan Carbon Works, Detroit.	Manufacturers.	Dissolved bone black, mineral phosphates, sulphate of ammonia, acidulated tankage, sulphate or muriate of potash.	Guaranteed contents Contents as found. . .
" 21	Homestead High Grade Garden and Vegetable Fertilizer.	2429	" ..	" ..	Dissolved bone black, mineral phosphates, sulphate of ammonia, acidulated tankage, sulphate or muriate of potash.	Guaranteed contents Contents as found. . .
" 21	Special Beet Fertilizer.	2430	" ..	" ..	" ..	Guaranteed contents Contents as found. . .
" 21	Sugar Beet Fertilizer.	2431	" ..	" ..	" ..	Guaranteed contents Contents as found. . .
" 21	Gregory's Special High Grade Tobacco Guano.	2432	" ..	" ..	" ..	Guaranteed contents Contents as found. . .
" 21	Dessicated Bone	2433	" ..	" ..	Pure animal bone.	Guaranteed contents Contents as found. . .
" 21	Nitrate of Soda.	2434	" ..	" ..	Imported from Chili.	Guaranteed contents Contents as found. . .
" 21	Muriate of Potash.	2435	" ..	" ..	Imported from Germany.	Guaranteed contents Contents as found. . .
" 22	Calumet Brand Potato, Tobacco and Onion Grower.	2436	Hirsh, Stein & Co., Chicago.	" ..	Bone and animal matter and sulphate of potash.	Guaranteed contents Contents as found. . .
" 22	Calumet Brand Special Potato and Onion Grower.	2437	" ..	" ..	" ..	Guaranteed contents Contents as found. . .
" 22	Calumet Brand Bone Phosphates.	2438	" ..	" ..	Bone. . . . .	Guaranteed contents Contents as found. . .
" 22	Nitrate of Soda	2439	" ..	" ..	.....	Guaranteed contents Contents as found. . .
" 22	Muriate of Potash.	2440	" ..	" ..	.....	Guaranteed contents Contents as found. . .
May 6	Standard. . . .	2441	Standard Fertl. & Ch. Co., Smith's Falls.	" ..	Nitrate of soda, sulphate of ammonia, potash and magnesia salts, mineral superphosphate and fine bone meal.	Guaranteed contents Contents as found. . .
" 6	Special. . . .	2442	" ..	" ..	" ..	Guaranteed contents Contents as found. . .
June 4	Fertilizer	2443	London Fertilizer Works, London, Ont.	" ..	Dry tankage, ammonia, phosphoric acid and potash.	Guaranteed contents Contents as found. . .



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## STANDARD FERTILIZERS

RESULTS OF ANALYSIS.											Remarks and Opinion of the Chief Analyst.
Nitrogen, p.c.		Phosphoric Acid, per cent.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.	Number of Sample.	
Total, includ- ing that of Nitric Acid or Ammonia if present.	Total calcul- ated as Am- monia.	Soluble in water.	Critic Soluble	Insoluble.	Total,	Total avail- able.					
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	\$ cts.		
2.06	2.50				10.00	8.00	1.50		17.30	2428	Up to guarantee.
2.44	2.96	7.65	2.08	1.62	11.35	9.73	1.89	9.00	22.14	....	
1.65	2.00				10.00	8.00	5.00		19.41	2429	"
1.85	2.24	7.40	1.43	0.92	9.75	8.83	4.47	12.50	21.49	....	
1.65	2.00				10.00	8.00	5.00		19.41	2430	"
1.82	2.21	7.70	1.38	0.97	10.05	9.08	4.77	13.50	22.00	....	
1.23	1.50				11.00	9.00	2.00		16.08	2431	"
1.18	1.43	6.50	1.73	1.52	9.75	8.23	1.95	13.10	16.12	....	
2.47	3.00				10.00	8.00	4.00		21.20	2432	"
2.56	3.11	7.65	1.33	1.02	10.00	8.98	6.04	12.75	25.69	....	
1.23	1.50				25.00					2433	"
2.04	2.48		20.25	10.05	30.30	20.25		2.25	32.18	....	
14.81	18.00								50.35	2434	"
15.57	18.90							2.25	52.94	....	
							50.00		50.00	2435	"
							49.62	0.40	49.62	....	
1.60	2.00			1.00	9.00	8.00	5.00		19.54	2436	"
2.24	2.72	3.85	6.63	0.72	11.20	10.48	6.43	3.75	25.17	....	
1.60	2.00			1.00	6.00	5.00	10.00		21.24	2437	"
2.35	2.86	2.80	7.23	0.97	11.00	10.03	10.18	3.90	29.77	....	
				1.00	11.00	10.00			11.30	2438	"
0.49	0.60	5.00	6.43	0.72	12.15	11.43		1.35	14.95	....	
15.00	18.21								51.00	2439	"
15.45	19.24							1.75	52.53	....	
							50.00		50.00	2440	"
							54.76	0.50	54.76	....	
2.06	2.5					9	2		24.84	2441	"
2.73	3.31	9.15	1.04	8.36	18.55	10.19	3.07	7.50	26.98	....	
2.88	3.5					8	7		25.59	2442	"
4.42	5.37	10.20	1.82	0.68	12.70	12.02	7.04	4.90	36.51	....	
4.96	5.95				16.70		3.03	1.09			"
4.30	5.22	trace	11.90	4.68	16.58	11.90	3.42	7.60	32.53	2443	



Dated when Received.	Designation.	Number of Sample.	Name and Address of Manufacturer.	By Whom Sent.	From what Materials Produced.	—
1909.						
May 25.	Soluble Bone....	2444	The Buffalo Fer-tilizer Co., Buf-falo, N.Y.	Manufacturers..	... ..	Guaranteed contents Contents as found...
" 25.	Extra Bone and Potash.	2445	"	"	.....	Guaranteed contents Contents as found...
" 25.	Ideal Wheat and Corn.	2446	"	"	.....	Guaranteed contents Contents as found...
" 25.	General Crop..	2447	"	"	.....	Guaranteed contents Contents as found...
" 25.	Bone and Pot-ash.	2448	"	"	.....	Guaranteed contents Contents as found...
" 25.	Farmer's Choice.	2449	"	"	.....	Guaranteed contents Contents as found...
" 25.	4-6-10 Fertilizer.	2450	"	"	.....	Guaranteed contents Contents as found...



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STANDARD FERTILIZERS.

RESULTS OF ANALYSIS.												Remarks and Opinion of the Chief Analyst.
Nitrogen, p.c.		Phosphoric Acid, per cent.					Potash.	Moisture.	Relative value per ton of 2,000 lbs.	Number of sample.		
Total, includ- ing that of Nitric Acid or Ammonia if present.	Total, calcul- ate 4 as Am- monia.	Soluble in Water.	Citric Soluble.	Insoluble.	Total.	Total avail- able.						
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	\$ cts.			
.....	.....	7.70	6.75	2.55	17.00	14.00	.....	.....	15 40	2444		
.....	.....	.....	.....	.....	14.45	.....	.....	.....	17 43	.....	Up to the guarantee.	
.....	.....	.....	.....	.....	.....	10.00	8.00	.....	19 00	2445		
.....	.....	7.90	2.25	2.05	12.20	10.15	7.75	.....	20 32	.....	"	
1.65	2.00	.....	.....	.....	.....	9.00	5.00	.....	20 51	2446		
2.08	2.53	7.90	1.10	1.20	10.20	9.00	6.17	.....	24 29	.....	"	
.....	.....	.....	.....	.....	.....	9.00	3.00	.....	12 90	2447		
.....	.....	6.80	3.70	1.85	12.35	10.50	3.05	.....	15 83	.....	"	
.....	.....	.....	.....	.....	.....	12.00	5.00	.....	18 20	2448		
.....	.....	8.90	2.90	2.40	14.20	11.80	5.51	.....	20 10	.....	"	
.....	1.00	.....	.....	.....	.....	8.00	5.00	.....	16 62	2449		
0.85	1.03	7.95	1.85	2.30	12.10	9.80	5.52	.....	20 67	.....	"	
.....	4.00	.....	.....	.....	.....	6.00	10.00	.....	27 82	2450		
2.86	3.50	7.95	0.30	1.85	10.10	8.25	11.20	.....	31 35	.....	"	







## APPENDIX D.

## BULLETIN No. 183—TEA

OTTAWA, July 6, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to submit to you, herewith, a report upon 222 samples of Teas, collected throughout Canada, in April of the present year.

Tea has been examined on three former occasions, under the Adulteration of Food Act. In April, 1891, a collection of 58 samples was made, and submitted for analysis to the late Professor Kenrick, of Winnipeg. His report will be found in Bulletin No. 24, published in June, 1891. None of the samples were declared to be adulterated, although about 6 per cent are classified as 'doubtful.' Professor Kenrick's report is valuable mainly on account of certain investigatory work contained in it. Thus, he has demonstrated that the so-called *domestic method* of infusing tea, while less fully removing the total soluble matters than is the case with ordinary laboratory methods, yields fairly constant and comparable results, if carried out according to a definite *modus*; and extracts the Theine with much greater relative completeness than the Tannin, a matter which is of importance in the household. The following figures are instructive and important:—

	LABORATORY METHODS OF EXTRACTION.				DOMESTIC METHOD OF EXTRACTION (KENRICK.)			
	No. of samples.	Total Extractive.	Theine.	Tannin.	No. of samples.	Total Extractive.	Theine.	Tannin.
Black teas(averages).	44	31·89	2·47	13·33	23	23·56	2·73	5·29
Green teas(averages)	19	39·92	2·14	19·47	7	31·38	2·46	9·49

NOTE.—The results given under laboratory methods are quoted from Hassall, Battershall, Bell, Dragendorff and others.

A second examination was made in 1904, when 73 samples collected throughout Canada, were found to be genuine teas. This report forms Bulletin No. 99.

A third collection was made in August, 1907, comprising 89 samples, of which 82 were pronounced genuine and 7 samples 'doubtful.' (See Bulletin No. 130).

The late chief analyst was guided in his decisions regarding teas, by the following Order in Council, of date September 11, 1894.



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‘Tea shall be considered as adulterated which contains leaves other than those of the tea-plant; or previously infused leaves or leaves of inferior quality to such an extent as to reduce the amount of extract or substances soluble in hot water to less than thirty per cent, or cause the proportion of ash soluble in hot water to be less than two and three-quarters per cent; or any admixture of chemicals or other deleterious substances, or such an amount of mineral matter as will cause the amount of ash to exceed eight per cent reckoned on the sample dried at 100° C.’

The Order in Council fixes 30 per cent as a minimum of extractive matter, without however defining a method by which the extract shall be made. It is seen from Professor Kenrick's figures, that the so called *domestic method*, does not extract 30 per cent of soluble matter in black teas, and it follows that this method cannot be regarded as authoritative under present regulations. For this reason it has not been adopted in the performance of the work now recorded. The extract has been determined by the following process.

To 5 grammes of the sample, ground to a tolerable degree of fineness, 200 cc. of water is added, and boiled on a sand-bath, in a glass flask, for two hours. It is then thrown on a filter, and the residue washed 3 times with warm water. The filtrate and washings, are made up to a definite volume and an aliquot portion is evaporated to dryness, at 100° C.

Working by this method, it will be seen that 157 samples (= 71 per cent of the collection) yielded 30 per cent of extractive. If a reasonable margin of error (1 per cent) be allowed, the number reaching the standard is 172 (78 per cent). Of 50 samples which fail to reach the standard of extractive, 31 are black teas, and 19 green teas. It has already been pointed out that the mean extractive matter in green tea is normally higher than in black.

It is impossible to describe the fifty samples falling below 30 per cent extractive, as adulterated under the Act, because the Order in Council of September 11, 1894, does not describe the method by which the extractive is to be determined. It is well known that if the boiling of vegetable matter be long continued, although readily soluble substances are dissolved in an hour, or less, the more difficult soluble material continues to go into solution for several hours, and a greatly prolonged boiling may bring about decomposition products which are more or less soluble, so that a definite end point is difficult to reach. It is evidently not the intention of this test, as applied to tea, that the boiling should be continued to the point of decomposition of tissues; but the mode of operating should be exactly defined.

In order to demonstrate the importance of this point, four samples which gave distinctly less than 30 per cent extractive by the method already described, were subjected to more vigorous extraction, and gave the following results:—

Number of Sample.	Extractive as per Tables.	Extraction continued.	Mean.	Difference.
37600	23.52	{ 34.84 34.66 }	34.74	11.22
36872	23.68	{ 26.72 25.36 }	26.04	2.36
40017	22.56	{ 33.00 31.00 }	32.00	9.44
29903	21.72	{ 25.20 25.40 }	25.30	3.58

These very large differences suffice to show the necessity of exactly defining the method by which extractive is to be determined.

Two samples, both invoiced as *Tea Dust* exceed the limit of 8 per cent of ash. It is open to question whether the article sold as *Tea Dust* should be regarded as a com-



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mercial tea, for purposes of the Act. These samples are sold at 12 cents per pound, retail; and this fact, together with the acknowledgment that they are *Tea Dust*, leads me to question whether they should be held to be adulterated under the Act.

## SUMMARY OF RESULTS.

	Samples.
Total number of Teas examined .....	222
"    "    Black Teas .....	160
"    "    Green " .....	54
"    "    Mixed " .....	8
Below Standard ) Black Teas .....	31
in Extractive ) Green " .....	19
Yielding more than 8 per cent ash.....	2

Previous inspections of tea have included all grades of the article. On this occasion special instructions were given to inspectors to purchase the cheapest grades only. With very few exceptions, the teas herein reported are retailed at from 15 to 30 cents per pound. They may therefore be regarded as representing the lower qualities of this article. Most samples consist of large, coarse leaves, very much broken, and have a large proportion of leaf-stalks and bits of stem. The delicate aroma of good tea is notably absent, on infusing; but the teas are botanically true to name, and no admixture of foreign leaves occurs.

The results of this examination as submitted, will enable action to be taken with a view to defining methods of analysis; and particularly emphasize the necessity of altering the Order in Council of September 11, 1894, so as to include in it a description of the mode of making the extract of tea therein referred to.

It is also desirable to ascertain whether an article sold as *Tea Dust*, is to be regarded as *Tea* for purposes of the Act.

I beg to recommend publication of this report as Bulletin No. 183.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



BULLETIN No. 183—TEA.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion).	Total Ash	RESULTS OF ANALYSIS.		Remarks and Opinion of the Chief Analyst.
				Quantity.	(Cents.				Extrac- tive.	Microscopical Examination.	

DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.

1909.							p. c.	p. c.		
April 14	Tea, Black.	33911	Wm. Moore, Halifax, 1 lb	20	Bryant & McDonald, Halifax, N.S.	.....	5 40	34 50	Broken tea leaves and some pieces of stems.	33911
"	"	33912	Wentzell's, Ltd., Halifax, 1 "	20	Vendors.....	.....	5 24	32 90	Broken tea leaves.	33912
"	"	33913	Crug & Hodgson, Halifax, 1 "	25	J. E. Morse & Co., Halifax, N.S.	.....	5 80	29 68	Broken tea leaves and a few pieces of stems	33913
"	"	33914	J. D. Stewart, Halifax, 1 "	25	Bauld Bros. & Co., Halifax, N.S.	.....	6 10	30 80	Broken tea leaves.	33914
"	"	33915	Jas. Hogan, Halifax, 1 "	25	Jno. Tobin & Co., Halifax, N.S.	.....	5 34	31 75	"	33915
"	"	33916	A. L. Doyle & Co., Halifax, 1 "	25	J. E. Morse & Co., Halifax, N.S.	.....	6 54	34 84	"	33916
"	"	33917	Forristall & Co., Halifax, 1 "	30	Bauld Bros. & Co., Halifax, N.S.	.....	5 50	35 20	"	33917
"	"	33918	T. J. Brown, Halifax, 1 "	30	H. W. DeForest, St John, N.B.	"Union" .....	5 48	32 68	Broken tea leaves and some pieces of stems.	33918
"	"	33919	A. J. Finley, Halifax, 1 "	30	Unknown.	.....	5 30	26 44	Broken tea leaves.	33919
"	"	33920	City Provision Co., Halifax, N.S.	30	A. Holbrecker, Halifax, N.S.	"Perfect Ceylon." .....	5 14	33 92	Broken tea leaves and some pieces of stems.	33920
"	"	33921	J. S. Archibald & Son, Halifax, N.S.	30	Unknown.	Sold as "China" .....	5 10	29 40	Broken tea leaves.	33921
"	"	33922	Shore & Campbell, Halifax, N.S.	25	Bryant & McDonald, Halifax, N.S.	.....	5 60	34 28	"	33922
"	"	33923	S. A. Clarke & Co., Halifax, N.S.	25	J. E. Morse & Co., Halifax, N.S.	"Monarch." .....	5 30	33 84	"	33923
"	"	33924	E. M. Walker, Dartmouth, N.S.	30	Unknown.	"Mountain." .....	5 56	38 00	Broken tea leaves and a few pieces of stems	33924
"	"	33925	A. W. Huxtable, Dartmouth, N.S.	30	Bauld Bros. & Co., Halifax, N.S.	"Acadia." .....	5 40	32 76	Broken tea leaves.	33925



DISTRICT OF PRINCE EDWARD ISLAND—THEO. MOORE, INSPECTOR.

April	7	Tea, Black.	31458	R. T. Holman, Ltd., Summerside.	1 lb.	25	T. H. Estabrooks, St. John, N.B.	"Reliance" blend	5 60	33 24	Broken tea leaves.	31458
"	7	"	31459	W. Y. Lidstone, Summerside.	1 "	25	Rowley & Davies, London, Eng.	"Beaver" blend	5 50	38 08	"	31459
"	7	"	31460	F. W. Strong, Summerside.	1 "	25	Burbridge, Pritchard & Bartlett, London, Eng.	"Crown" blend	5 64	33 12	"	31460
"	7	"	31461	Brace & McKay, Summerside.	1 "	25	Rowley & Davies, London, Eng.		5 54	36 12	Broken tea leaves and a few pieces of stems	31461
"	7	"	31462	Sinclair & Stewart, Summerside.	1 "	25	J. E. Morse & Co., Halifax, N.S.		5 54	38 32	Broken tea leaves.	31462
"	8	"	31463	J. A. Hynes, Kensington.	1 "	25	T. H. Estabrooks, St. John, N.B.		5 40	32 12	Broken tea leaves and a few pieces of stems	31463
"	8	"	31464	James Kennedy, Kensington.	1 "	25	H. W. DeForest, St. John, N.B.	"Starlight" blend.	5 40	32 32	Broken tea leaves.	31464
"	12	"	31465	A. E. McKinnon, Mount Stewart.	1 lb.	25	Carvell Bros., Charlottetown		5 34	31 40	Broken tea leaves.	31465
"	12	"	31466	W. H. Pigott, Mount Stewart.	1 "	25	T. H. Estabrooks, St. John.		5 34	34 20	"	31466
"	12	"	31467	Clarke Bros., Mount Stewart.	1 "	24	W. D. Stroud, Montreal.	"Champion" Blend.	5 50	33 12	"	31467
"	12	"	31468	P. W. McLeod, Mount Stewart.	1 "	24	H. W. De Forrest, St. John, N.B.	"McLeod's Scotch" Blend	5 60	30 56	Broken tea leaves and some pieces of stems.	31468
"	12	"	31469	A. A. McDonald Bros., Charlottetown.	1 "	25	Stroud & Son, Montreal	"A Blend Tea"	5 44	38 72	Broken tea leaves.	31469
"	12	"	31470	W. W. Jenkins, Georgetown.	1 "	25	McGougan & Co., Georgetown.	"Empire" Blend	5 48	35 60	Broken tea leaves and a few pieces stems.	31470
"	12	"	31471	Stewart & Son, Charlottetown.	1 "	25	Bryant & McDonald, Halifax.	"Famous" Blend	5 44	29 16	"	31471
"	12	"	31472	George Rackham, Charlottetown.	1 "	25	H. Haszard, Charlottetown.	"Haszard's" Blend.	5 40	33 76	Broken tea leaves.	31472

DISTRICT OF NEW BRUNSWICK J. C. FERGUSON, INSPECTOR.

Mar.	22	Tea, Black.	29892	Barkers Ltd., St. John, N.B.	St. 1 lb.	30	J. Harvey Brown, St. John, N.B.	"Peerless"	5 54	32 92	Broken tea leaves	29892
"	22	"	29893	H. W. Dykeman, St. John, N.B.	St. 1 "	35	P. C. Larkin & Co., Montreal.	"Salada"	4 90	26 48	"	29893
"	23	"	29894	G. H. Stephenson, St. John, N.B.	St. 1 "	30	T. H. Estabrooks & Co., Ltd., St. John, N.B.	"Red Rose"	5 08	32 60	"	29894
"	23	"	29895	D. Cosman, St. John, N.B.	St. 1 "	30	Baird & Peters, St. John, N.B.	"Vim"	5 50	32 12	Broken tea leaves and a few pieces of stems.	29895
"	24	"	29896	James Collins, St. John, N.B.	St. 1 "	35	Vendor	"Emerald"	5 50	32 32	Broken tea leaves and some pieces of stems.	29896
												Extractive low



BULLETIN No. 183--TEA.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.			Remarks and Opinion of the Chief Analyst.
				Quantity.	(Cents)			Total Ash.	Extractive.	Microscopical Examination.	
1909.								p.c.	p.c.		
Apr. 6	Tea, Black.	29897	T. W. Sanson, Fredericton, N.B.	1 "	30	Chas. H. McDonald, St. John, N.B.	"Red Clover"	5.54	25.68	Broken tea leaves.	29897 Extractive low.
" 8	"	29898	Estate of John Graham Woodstock, N.B.	1 "	40	W. C. Purves, Stephen, N.B.	"	5.48	33.52	"	29898
" 8	"	29899	B. Beveridge, Andover, N.B.	1 "	35	Harry W. DeForest, St. John, N.B.	"	5.50	30.08	Broken tea leaves and some pieces of stems.	29899
" 10	"	29900	J. W. McPhail, Perth, N.B.	1 "	35	W. C. Purves, phen, N.B.	"Nectar"	5.28	32.24	"	29900
" 14	"	29901	N. W. Eveleigh & Co., Sussex, N.B.	1 "	25	Chas. H. McDonald, St. John, N.B.	"Eveleighs Special"	5.50	33.72	"	29901
" 10	"	29902	C. W. Lewis, Perth, N.B.	1 "	30	W. D. Stroud, Montreal.	"	5.91	34.32	Broken tea leaves.	29902
" 14	"	29903	Alex. J. Roy, Moncton, N.B.	1 "	25	Geo. E. Barbour Co., Ltd., St. John, N.B.	"	4.68	24.72	"	29903 Extractive low.
" 16	"	29904	J. D. Paulin, New-castle, N.B.	1 "	30	Bryan & McDonald, Halifax, N.S.	"Paulus Best"	5.40	34.64	Broken tea leaves and some pieces of stems.	29904
" 17	"	29905	Adams, Berns & Co., Bathurst, N.B.	1 "	25	Chas. H. McDonald, St. John, N.B.	"	5.86	24.56	Broken tea leaves and some stems.	29905 Extractive low.
" 19	"	29906	Moore Bros., Bellton, N.B.	1 "	30	W. F. Hatheway Co., Ltd., St. John, N.B.	"Tiger"	5.44	25.84	Broken tea leaves.	29906

DISTRICT OF QUEBEC--E. BELAND, INSPECTOR.

April 21	Tea, Green	36868	T. Falardeau, Quebec	1 lb.	13	T. B. Bedard & firm, Quebec.	"	7.24	35.42	Broken tea leaves.	36868
" 21	" Mixed.	36869	C. T. Bailey, Quebec.	1 "	12	Stroud, Montreal	"	9.74	32.60	Tea dust.	36869 Ash too high.
" 21	" Green.	36870	F. X. Goslin, Quebec	1 "	20	Lavoie & Dion, Quebec	"	6.10	31.48	Broken tea leaves.	36870



SESSIONAL PAPER No. 14

"	21	"	"	36871	Louis Nadeau, Quebec	1 "	25	Unknown.	.....	5.28	31	76	"	36871	
"	22	"	Black	36872	A. Pouliot, Quebec	1 "	20	Lavoie & Latulippe, Quebec.	.....	6.90	23	68	Broken tea leaves and some pieces of stems.	36872	Extractive low.
"	22	"	Green	36873	Emile Emond	1 "	20	Stroud, Montreal	.....	6.54	28	12	Broken tea leaves.	36873	"
"	22	"	Black	36874	L. A. Warren, Quebec	1 "	20	A. Gigeure, Quebec.	.....	5.44	23	56	"	36874	"
"	22	"	Green	36875	Denis Davis, Quebec	1 "	40	Unknown	.....	6.50	32	56	"	36875	
"	22	"	Black	36876	A. Turcotte, Quebec	1 "	20	Drouin Frère, Quebec.	.....	5.48	32	32	"	36876	
"	22	"	Green	36877	A. Brodeur, Quebec	1 "	30	Unknown.	.....	6.34	24	72	"	36877	Extractive low.
"	22	"	"	36878	T. E. Gregoire, Quebec	1 "	12	Lavoie & Dion, Quebec	.....	9.24	26	00	Tea dust.	36878	Extractive low; ash too high.
"	22	"	"	36879	T. L. Letourneau, Quebec.	1 "	15	Joseph & Son, Quebec	.....	6.04	36	56	"	36879	
"	22	"	"	36880	C. Belanger, Quebec	1 "	15	Unknown.	.....	7.54	25	08	Broken tea leaves.	36880	Extractive low.
"	22	"	Black	36881	M. W. Colman	1 "	25	"	.....	5.34	35	04	Broken tea leaves and a few pieces of stems	36881	
"	22	"	Green	36882	H. St. Cyr, Quebec	1 "	15	Whithead & Turner, Quebec.	.....	7.40	26	60	Slightly broken tea leaves.	36882	Extractive low.

DISTRICT OF ST. HYACINTHE J. C. ROULEAU, INSPECTOR.

April 19	Tea, Green.	1001	O. F. Piche, Drummondville.	1 lb.	25	Unknown.	.....	Green, Ceylon	.....	6.10	39	44	Broken tea leaves.	1001	
"	20	"	P. Laroche, Farnham.	1 "	40	Kearney Bros., Montreal.	.....	Mont Japan	.....	6.14	30	40	Broken tea leaves and a few stems.	1002	
"	21	"	J. Raymond, St. Jean.	1 "	30	M. Brassard, St. Jean.	.....	"	.....	5.36	29	04	Broken tea leaves.	1003	
"	23	"	J. Brodeur, Granby.	1 "	40	W. D. Stroud, Montreal.	.....	"	.....	6.80	39	08	"	1004	
"	26	"	A. G. Prefontaine, Beloit.	3 pks	60	P. C. Larkin & Co., Montreal.	.....	Green, Guaran-teed pure.	.....	4.56	38	76	Broken tea leaves and a few stems.	1005	
"	28	"	W. L. Beauchemin, Roxton Falls.	"	25	Hudon, Hebert & Cie, Montreal.	.....	Japan	.....	6.84	40	00	Broken tea leaves.	1006	
"	28	"	A. Chicoine, Acton vale.	3 "	15	Kearney Bros., Montreal.	.....	Mont	.....	6.46	25	44	Minute fragments of tea leaves.	1007	Extractive low.
"	28	"	Geo. E. Hetu, Upton.	1 lb	40	Lacaille & Gendreau, Montreal.	.....	Japan	.....	6.08	36	84	Broken tea leaves.	1008	
"	29	"	T. Mahieu, Arthabaska-ville.	1 "	25	H. H. Guay, Victoria-ville.	.....	Green	.....	6.64	24	44	"	1009	Extractive low



BULLETIN No. 183—TEA.

Date of Collection.	Nature of Sample.	Number of Sample.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion).	RESULTS OF ANALYSIS.			Remarks and Opinion of the Chief Analyst.
			Quantity.	Cents.			Total Ash	Extractive.	Microscopical Examination.	

DISTRICT OF ST. HYACINTHE J. C. ROULEAU, INSPECTOR Concluded.

1909.							p. c.	p. c.		
April 29	Tea, Green.	1010	U. Mahew, Victoria ville.	25	L. Chaput fils & Co., Montreal.	.....	6.20	28.60	Broken tea leaves and a few stems.	1010 Extractive low
May 5	" Black.	1011	W. B. Murray, El. Sherbrooke.	40	Unknown	Black	4.94	35.64	Broken tea leaves.	1011
" 5	" "	1012	Johnston Bros., Len- noxville.	30	"	"	5.54	28.76	"	1012 Extractive low.
" 6	" "	1013	F. W. D. Melloow, 1 Rock Island.	25	Lipton, England.	"	6.14	28.12	"	1013
" 10	" Green.	1014	Louis Valin, St. Joseph de St. Hyac.	30	Kearney Bros., Mon- treal.	Japan	6.70	32.00	Broken tea leaves and a few stems	1014
" 18	" "	1015	C. Dansereau, Centre corner.	30	Lacaille & Gendreau, Montreal.	"	5.70	37.52	"	1015

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

April 13	Tea, Green.	40011	A. Laurandean, 85 St. Paul St., Montreal.	20	.....	Green	6.66	26.08	Broken tea leaves.	40011 Extractive low.
" 13	" Black.	40012	"	25	.....	Black	5.12	27.64	Broken tea leaves and pieces of stems.	40012
" 14	" "	40013	S. Desaulniers, 437 Notre Dame W.	20	.....	"	5.54	25.16	"	40013
" 14	" "	40014	"	25	.....	"	6.14	27.72	"	40014
" 14	" "	40015	C. T. Spinello, 502 Notre Dame W.	35	.....	"	5.74	34.08	Broken tea leaves.	40015
" 14	" Green	40016	N. Sirois, 32 Craig St., Montreal.	25	J. A. Simard, Montreal	Japan	7.10	30.52	Broken tea leaves and pieces of stems.	40016
" 14	" Black.	40017	J. J. Duffy & Co., Montreal.	30	.....	Black, Special Blend.	5.40	22.56	"	40017 Extractive low.



"	26	"	Green.	40018	F. Rivet, Joliette.....	1 " ..	30	.....	Japan .....	5 90	37 40	"	.....	40018
"	26	"	Black.	40019	O. Chevalier & fils., Joliette.	1 " ..	35	.....	Black .....	5 30	36 68	Broken tea leaves.....	.....	40019
"	28	"	"	40020	E. Lavigne, Lachute, P.Q.	1 " ..	30	.....	" .....	5 24	32 08	"	.....	40020
"	28	"	Green.	40021	G. L. Meikle, Lachute, P.Q.	1 " ..	25	.....	Green .....	6 54	41 72	Broken tea leaves and pieces of stems.	.....	40021
May	6	"	"	40022	C. E. Laflamme, Jérôme.	1 " ..	25	.....	Japan .....	6 20	27 56	Broken tea leaves.....	.....	40022 Extractive low.
"	6	"	Black	40023	J. M. Richard, Jérôme.	1 " ..	30	.....	Black .....	5 30	31 08	Broken tea leaves and a few pieces of stems.	.....	40023
"	12	"	Green.	40024	E. Brais, Montreal.	1 " ..	30	.....	Japan.....	6 74	30 84	Broken tea leaves.....	.....	40024
"	12	"	"	40025	A. Genereau, Montreal	1 " ..	25	.....	" .....	7 14	35 00	"	.....	40025

DISTRICT OF OTTAWA J. A. RICKY, INSPECTOR.

Mar.	16	Tea, Green.	22911	M. J. Lavigne, Hull, P.Q.	1 lb	15	Unknown .....	.....	.....	7 11	27 56	Broken tea leaves.....	.....	22911 Extractive low.
"	16	"	22912	D. Seguin, Hull, P.Q.	1 " ..	20	" .....	.....	.....	7 00	28 88	"	.....	22912
"	19	"	Black.	22913	R. J. Cameron, Buckingham.	1 " ..	25	J. A. Cunningham, "Owl Chop" .....	.....	5 00	28 96	Broken tea leaves and pieces of stem.	.....	22913
"	19	"	Green.	22914	McCallum & Labaie, Buckingham.	1 " ..	20	F. W. Allan, Buckingham.	.....	6 30	28 16	Broken tea leaves .....	.....	22914
"	22	"	Black.	22915	W. A. Hodgins, Shawville.	1 " ..	30	Matthewsons Sons, Montreal.	.....	5 00	33 52	Broken tea leaves and pieces of stem.	.....	22915
"	23	"	Green.	22916	G. A. Ellis, Renfrew.	1 " ..	25	Thos. Woods, Montreal .....	.....	4 62	30 52	Broken tea leaves. ....	.....	22916
"	23	"	"	22917	Carswell & Co., Renfrew.	1 " ..	25	Geo. Robertson & Son, Kingston.	.....	6 34	31 60	"	.....	22917
"	23	"	Black.	22918	J. L. Lafontaine, Ottawa.	1 " ..	10	Canada Direct Tea Trading Co.	.....	5 96	32 72	Broken tea leaves and pieces of stem.	.....	22918
"	24	"	Green.	22919	D. St. Amour, Ottawa	1 " ..	25	S. J. Major, Ltd., Ottawa.	.....	7 30	28 32	Broken tea leaves.....	.....	22919 Extractive low.
"	24	"	Black.	22920	J. E. Duhaime, Ottawa	1 " ..	25	F. J. Castle Co., Ottawa .....	.....	5 40	32 28	"	.....	22920
"	24	"	Green.	22921	F. Schingh, Ottawa ..	1 " ..	25	Jos. Grant, Ottawa .....	.....	5 01	34 76	"	.....	22921
"	26	"	Black	22922	Jas. Herbert, Ottawa	1 " ..	25	Kearney Bros., Montreal.	.....	5 54	33 20	Broken tea leaves and pieces of stem.	.....	22922
"	26	"	Green.	22923	M. J. Laverdure, Hull.	1 " ..	25	" .....	.....	7 08	25 52	"	.....	22923 Extractive low.
"	26	"	Black.	22924	A. Gagnon, Hull.....	1 " ..	25	Unknown .....	.....	5 04	31 84	Broken tea leaves. ....	.....	22924
"	27	"	"	22925	W. H. Dickson, Quyon, P.Q.	1 " ..	25	W. D. Stroud, Montreal .....	.....	5 54	33 08	Broken tea leaves and a few pieces of stems	.....	22925



BULLETIN [No. 183—TEA.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Inspector's Report. (Is not an expression of Opinion).	RESULTS OF ANALYSIS.			Remark and Opinion of the Chief Analyst.
				Quantity.	Cents.		Total Ash.	Extrac- tive.	Microscopical Examination.	
DISTRICT OF KINGSTON—JAS. HOGAN, INSPECTOR.										
1909.							p. c.	p. c.		
Mar. 17	Tea, Green.	39441	Geo. Gibson, Kingston	1 lb. . .	30	Minto Bros., Toronto.	5.74	33.12	Broken tea leaves and pieces of stem.	39441
"	" Mixed.	39442	Wm. Davies, Kingston	1 " . .	30	Wm. Davies . . . . .	4.96	32.00	Broken tea leaves . . .	39442
"	" Black.	39443	W. D. Stroud, King- ston.	1 " . .	20	W.D. Stroud, Montreal	5.34	31.84	Broken tea leaves and pieces of stem.	39443
"	" "	39444	P. A. Haffner, King- ston.	1 " . .	30	Geo. Robertson & Son, Kingston.	5.34	38.36	" " . . . . .	39444
"	" Green.	39445	Jas. McCalla, King- ston.	1 " . .	20	Kearney Bros., Mont- real.	6.96	28.64	Broken tea leaves . .	39445
"	" Black.	39446	J. Lennon, Kingston.	1 " . .	25	W. G. Craig, Kingston . . .	5.28	33.72	" " . . . . .	39446
"	" "	39447	J. A. Donaldson, King- ston.	1 " . .	25	" " . . . . .	5.60	31.30	" " . . . . .	39447
"	" "	39448	A.T. Morris, Kingston	1 lb. . .	25	Geo. Robertson, King- ston.	5.24	30.80	Broken tea leaves . .	39448
"	" "	39449	H.M.Stover, Kingston	1 " . .	40	" " . . . . .	5.20	32.32	Broken tea leaves and pieces of stem	39449
"	" Green	39450	C. Litton, Kingston . .	1 " . .	25	Minto Bros., Toronto.	6.20	33.08	Broken tea leaves . . .	39450
"	" Black.	39451	J. Harker, Belleville.	1 " . .	25	Unknown . . . . .	5.40	32.00	" " . . . . .	39451
"	" "	39452	Guillet Bros., Cobourg	1 " . .	25	Hayhoe Co., Toronto.	5.50	29.24	Broken tea leaves and pieces of stem.	39452
"	" "	39453	J. E. Lillien, Peterboro	1 " . .	26	Perkins & Ince Co., Peterboro.	5.16	32.04	Broken tea leaves . .	39453
"	" "	39454	W. J. Roulty, Peter- boro.	1 " . .	30	Balfourd & McLain, Hamilton.	5.02	35.48	" " . . . . .	39454
"	" "	39455	R. A. Dutton, Peter- boro.	1 " . .	25	Wran Bros., Toronto.	5.90	37.84	Broken tea leaves and pieces of stem.	39455



SESSIONAL PAPER No. 14

## DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.

14	April 5	Tea, Black.	36202	John Young, Hamilton	1 lb.	25	Balfour Smye & Co., Hamilton.	5 38	34 40	Broken tea leaves and a few pieces of stem.	36202	
"	" 6	" Green.	36203	G. H. Williams, Hamil- ton.	1 "	30	W. H. Gillard & Co., Hamilton.	5 94	28 76	Broken tea leaves.	36203	Extractive low.
"	" 5	" Black.	36204	J. W. Jones, Hamilton	1 "	25	Lumsden Bros., Hamil- ton.	5 38	29 48	"	36204	
"	" 8	" Green.	36205	John Bond & Co., Au- rora.	1 "	25	Kearney Bros., Mon- treal.	6 20	26 48	"	36205	Extractive low
"	" 8	" Black.	36206	F. H. Prosser, New- market.	1 "	25	Canada Brokeage Co., Toronto.	5 10	29 88	Broken tea leaves and some stems,	36206	
"	" 12	" "	36207	M. J. Douglas, Brad- ford.	1 "	25	Blue Ribbon Tea Co., Toronto.	5 48	35 44	Broken tea leaves.	36207	
"	" 13	" Green	36208	John Cushman, Barrie	1 "	25	R. B. Hayhoe & Co., Toronto.	6 74	29 44	"	26208	
"	" 13	" Black.	36209	J. M. Bothwell, Allan- dale.	1 "	25	Vendor.	5 38	33 36	Broken tea leaves and pieces of stem.	36209	
"	" 14	" "	36210	Wm. McMullin, Allis- ton.	1 "	30	Minto Bros., Toronto.	5 56	33 64	"	36210	
"	" 14	" "	36211	J. J. McKnight	1 "	30	John Sloan & Co., To- ronto.	5 48	40 00	Broken tea leaves.	36211	
"	" 16	" Green.	36212	Oliver McKay, George- town.	1 "	30	Minto Bros., Toronto.	5 30	41 68	"	36212	
"	" 17	" Black.	36213	J. S. Bond, Toronto	2 Pkgs	30	T. H. Esterbrooks, To- ronto.	5 00	33 24	"	36213	
"	" 17	" "	36214	A. Browne, Toronto	1 lb.	30	J. Lumsden Co., To- ronto.	5 44	35 24	"	36214	
"	" 17	" "	36215	A. E. Proctor, Toronto	2 Pkgs	40	H. P. Eckardt & Co., Toronto.	5 60	38 32	Broken tea leaves and some stems.	36215	
"	" 17	" Green.	36259	J. Thornton, Toronto.	1 lb.	25	James Lumbers Co., Ltd., Toronto.	5 74	40 04	Broken tea leaves.	36259	

## DISTRICT OF LONDON—T. J. KIDD, INSPECTOR.

Mar. 26	Tea, Mixed.	30597	White Packing Co., 1½ lb. Stratford.	45	T. H. Esterbrooks, St. John's, Newfoundland	" Red Rose "	5 20	32 56	Broken tea leaves	30597	
" 29	" Black	30602	T. S. Blees, Seaforth. 1½ "	45	Howey, Stratford	"	5 12	30 32	"	30602	
" 31	" Mixed	30614	Mosish Linder, Goder- 1½ " ich.	60	McEwin Bros., Goder- ich.	" Blue Ribbon "	5 30	31 64	"	30614	
" 31	" Black	30615	Mrs. J. Carroll, Goder- 1½ " ich.	60	Blue Ribbon Tea Co., Montreal.	"	5 80	31 32	Broken tea leaves and pieces of stem.	30615	
" 1	" Mixed	30616	Poplestone & Gardner, 1½ " Blyth.	39	"	"	5 58	29 16	Broken tea leaves	30616	
" 1	" Black	30618	G. M. Chambers, Blyth 1 "	40	W. H. Gillard, Hamil- ton.	" Aroma " Black	5 14	28 76	"	30618	Extractive low



BULLETIN No. 183—TEA.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Inspector's Report. (Is not an expression of Opinion.)	RESULTS OF ANALYSIS.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.		Total Ash	Extrac- tive	Microscopical Examination.		

DISTRICT OF LONDON T. J. KIDD, INSPECTOR *Concluded.*

1909.							p. c.	p. c.			
April 1	Tea, Black.	30621	Elman Moore, Wing-ham.	1½ "	45	Salada Tea Co., Toronto.	6.36	29	20	30621	Broken tea leaves and pieces of stem.
" 2	" "	30623	Kerr & Birds, Wing-ham.	1½ "	45	Unknown.	5.40	26	24	30623	Broken tea leaves. Extractive low.
" 2	" Green	30625	A. J. Malcolm, Wing-ham.	1 "	25	Blue Ribbon Tea Co., Toronto.	5.70	27	20	30625	" Extractive low.
" 2	" Mixed	30626	Waller Bros	1½ "	60	H. P. Eckert & Co., Toronto.	5.84	32	40	30626	Broken tea leaves and pieces of stem.
" 2	" Black	30627	N. Krotz, Listowel.	1 "	25	T. B. Escott & Co., London, Ont.	6.50	26	28	30627	Broken tea leaves. Extractive low.
Mar. 26	" Mixed.	30599	McCulley & Haugh, Stratford.	1½ "	45	McIlhardy, Stratford.	5.30	31	04	30599	"

DISTRICT OF WINDSOR—JOHN TALBOT, INSPECTOR.

April 5	Tea, Black.	34755	T. A. Rowat, London.	1 lb.	25	Elliott & Mar, London	5.48	31	08	34755	Broken tea leaves and a few pieces of stem
" 5	" Green	34756	John Diprose, London.	1 "	30	"	5.54	34	60	34756	Broken tea leaves.
" 5	" Black	34758	N. McLeod, London.	1 "	25	Balfour & Co., Hamul ton.	5.56	33	84	34758	"
" 5	" Green	34759	Kidner & Co., London.	1 "	25	Ed. Adams & Co., London.	7.04	31	60	34759	"
" 5	" Black	34760	F. G. Willis, London.	1 "	25	Estabrooks, Toronto.	5.70	33	92	34760	Broken tea leaves and a few pieces of stem
" 5	" "	34761	T. W. Vincent, London.	1 "	30	"	5.64	34	16	34761	"
" 5	" Green	34762	Mrs. Yates, London.	1 "	30	Scandrett Bros., London.	6.40	36	92	34762	Broken tea leaves.
April 5	" Black	34764	T. McKay.	1 lb.	25	Ed. Adams & Co., London.	5.30	29	12	34764	Broken tea leaves.



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"	5	"	"	34766	Rowntree & Fonger...	1 "	25	Hayhoe, Toronto.....	.....	5 80	30 00	"	34766
"	5	"	Green	34767	H. Glach .....	1 "	25	A. M. Smith & Co., London.	.....	6 16	32 68	Broken tea leaves and a few pieces of stems	34767
"	5	"	"	34768	H. Marshall.....	1 "	25	M. Masurett & Co., London.	.....	5 84	31 04	Broken tea leaves.....	34768
"	5	"	Black	34774	H. Fountaine.....	1 "	25	Unknown .....	.....	5 70	25 20	"	34774 Extractive low.
"	6	"	"	34775	F. Harley & Son.....	1 "	25	Balfour & McLaren, Hamilton.	.....	5 20	29 44	"	34775
"	6	"	"	34777	H. Ranahan.....	1 "	25	"	.....	5 14	25 36	"	34777 Extractive low.
"	6	"	Green	34778	Chas. Finchamp ...	1 "	25	M. Masurett & Co., London.	.....	6 10	29 28	Broken tea leaves and a few pieces of stems	34778

## DISTRICT OF MANITOBA A. C. LARIVIERE, INSPECTOR.

April 19	Tea, Black	35881	H. Fenson, Winnipeg	1 lb	40	Salada Tea Co	"Salada"	4 94	27 80	Broken tea leaves	35881	Extractive low.
"	"	35882	C. A. Breakwell, Winnipeg	1 "	30	The Jobin Marrin Co., Winnipeg.	"	5 50	33 00	"	35882	
"	"	35883	T. R. Brough, Carberry	1 "	35	Unknown	"	5 70	30 32	Broken tea leaves and a few pieces of stems	35883	
"	"	35884	R. Beattie & Sons, Elmwood P.O., Win- nipeg.	1 "	25	"	"	5 74	38 16	"	35884	
"	"	35885	B. Moffet, Winnipeg	1 "	25	Crook, Brown & Co., Winnipeg.	"	5 20	33 04	Broken tea leaves	35885	
"	"	35886	J. Braunstein, Winni- peg.	1 "	25	The Godville Co.	"	5 66	26 64	Broken tea leaves and a few pieces of stems	35886	Extractive low.
"	"	35887	S. J. Staples, Carman, Man.	1 "	15	Hunt & Co., Vokohama	"	6 70	30 20	Tea dust	35887	
"	"	35888	P. D. Alair, Elm Creek, Man.	1 "	35	Campbell Bros., Wil- son, Winnipeg.	"Royal Shield"	5 74	34 04	Broken tea leaves	35888	
"	"	35889	R. H. Staples, Elm Creek, Man.	1 "	40	G. F. & J. Galt, Win- nipeg.	"Blue Ribbon" Red label Tea.	5 70	33 56	"	35889	
"	"	35890	Holliday & Simpson, Elm Creek, Man.	1 "	40	Unknown	"	5 60	26 20	Tea leaves and some pieces of stem.	35890	Extractive low.
"	"	35891	J. T. Newberry, Nap- inka.	1 "	40	T. H. Estabrooks, St. John, N.B.	"Red Rose"	5 60	35 24	Broken tea leaves	35891	
"	"	35892	W. R. Shaefer, Winni- peg.	1 "	50	The Dyson Co., Winni- peg.	"Red Cross"	6 00	37 54	Broken tea leaves and a few pieces of stems	35892	
"	"	35893	B. Adelman, Winnipeg	1 "	40	Unknown	"	5 54	36 32	Broken tea leaves and a few pieces of stems	35893	
"	"	35894	S. J. Deroche, Winni- peg.	1 "	40	"	"	5 24	36 72	Broken tea leaves and stems.	35894	
"	"	35895	S. Katz, Winnipeg	1 "	40	The Jobin Marrin Co., Ltd., Winnipeg.	"Challenge"	5 70	34 68	Broken tea leaves	35895	



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## BULLETIN No. 183—TEA.

Date of Collection.	Nature of Sample.	Number of Sample.	Cost.		Name and Address of Vendor.	Quantity (Cents)	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion).	RESULTS OF ANALYSIS.			Number of Sample.	Remarks and Opinion of the Chief Analyst.	
			Total Ash	Extrac- tive.					Microscopical Examination.					
DISTRICT OF CALGARY—R. W. FLETCHER, INSPECTOR.														
1909.														
April 21	Tea, Black.	28959	A. Brandelli, Calgary.	1 lb.	50	G. F. & J. Galt, Ltd., Calgary.			5.64	33.80	Broken tea leaves.	28959		
"	"	28960	Golden West Grocery, Calgary.	1 "	30	L. T. Mewburn & Co., Ltd., Calgary.			5.90	24.00	"	28960	Extractive low.	
"	"	28961	W. Maitland, Calgary.	1 "	50	"			5.90	36.44	Broken tea leaves and pieces of stems.	28961		
"	"	28962	Mrs. Palmer, Calgary.	1 "	50	G. F. & J. Galt, Ltd., Calgary.			5.64	32.64	Broken tea leaves.	28962		
"	"	28963	Hallett & Longlons, Calgary.	1 "	35	W. W. Moore, Ltd., Calgary.			5.76	32.64	"	28963		
"	"	28964	S. G. Freeze, Calgary.	1 "	35	Balfour & McLaren, Hamilton.			5.10	31.76	"	28964		
"	"	28965	Peoples Co-operative Store, Calgary.	1 "	40	Wm. Davies & Co., Ltd., Toronto.			4.60	34.32	"	28965		
"	"	28966	J. T. Macdonald, Cal- gary.	1 "	40	Brooke, Bond & Co., London, Eng.			5.70	33.52	"	28966		
"	"	28967	Spen Bros., Calgary.	1 ½ "	60	"			6.10	34.0	Broken tea leaves and pieces of stems.	28967		
"	"	28968	Watson Bros., Calgary.	1 "	40	Jos. Tetley & Co., Lon- don, Eng.			4.84	33.76	Broken tea leaves and some pieces of stems.	28968		
"	"	28969	W. Verrier, Calgary.	1 "	35	L. T. Mewburn & Co., Ltd., Calgary.			5.70	33.68	"	28969		
"	"	28970	McLellan & Hawkes, Calgary.	1 ½ "	70	Georgeson & Co., Ltd., Calgary.			5.20	34.64	Broken tea leaves	28970		
"	"	28971	Premium Tea Co., Ltd., Calgary.	1 "	25	L. T. Mewburn & Co., Ltd., Calgary.			5.58	32.28	"	28971		
"	"	28972	Copas & Emerson, Cal- gary.	1 "	40	Unknown			5.36	31.76	"	28972		
"	"	28973	C. J. Winn, Calgary.	1 "	50	G. F. & J. Galt, Ltd., Calgary.			5.86	27.32	"	28973	Extractive low.	



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## DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR.

Mar. 24	Tea, Black.	37589	T. Russell, Vancouver	1 lb.	40	Kelly, Douglass & Co., Vancouver.	.....	5 40	30 32	Broken tea leaves.	37589
" 24	"	37590	C. L. Smith, Vancouver.	1 "	35	W. H. Malkin & Co., Vancouver.	.....	5 24	32 44	"	37590
" 24	"	37591	J. H. Atkins, Vancouver.	1 "	25	"	.....	5 24	30 20	Broken tea leaves and some pieces of stems.	37591
" 24	"	37592	Pioneer Grocery, Vancouver.	1 "	25	Unknown	.....	5 70	31 00	"	37592
" 24	"	37593	Glencoe Grocery, Vancouver.	1 "	30	Vancouver Tea Co., Vancouver.	.....	5 40	33 82	"	37593
" 24	"	37594	H. A. Edgett & Co., Vancouver.	1 "	25	W. H. Malkin & Co., Vancouver.	"The H. A. Edgett Special"	5 70	32 48	Broken tea leaves.	37594
" 24	"	37595	Geo. Wagg, Vancouver	1 "	30	Wm. Braid & Co., Vancouver.	.....	5 52	32 64	"	37595
Mar. 24	"	37596	McCulloch Bros., Vancouver.	1 lb.	40	Galt Bros., Vancouver.	.....	5 34	29 00	Broken tea leaves.	37596
" 24	"	37597	S. Coranson, Vancouver.	1 "	35	Unknown	.....	4 80	35 28	"	37597
" 24	"	37598	Dukes Grocery, Vancouver.	1 "	35	Wm. Braid & Co., Vancouver.	"Dukes Special"	5 50	32 68	Broken tea leaves and some pieces of stem.	37598
" 24	"	37599	Gem Grocery, Vancouver.	1 "	40	Ridgeways Ltd.	.....	5 36	31 12	Broken tea leaves.	37599
" 25	"	37600	J. A. McMillan, North Vancouver.	1 "	40	Balfour McLaren, Victoria.	.....	5 66	23 52	Broken tea leaves and pieces of stem.	37600 Extractive low.
" 25	"	37601	A. R. Steacy, Vancouver.	1 "	40	E. W. Leeson & Co., Vancouver.	.....	5 48	28 08	Broken tea leaves and some pieces of stem.	37601
" 27	"	37602	London Grocery, Vancouver.	1 "	25	J. W. Berry, Vancouver.	.....	5 46	29 44	Broken tea leaves and pieces of stem.	37602
" 27	"	37603	A. & C. Grocery, Vancouver.	1 "	25	Young Bros., Vancouver.	.....	5 54	26 00	Broken tea leaves and some pieces of stem.	37603 Extractive low.

## DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

April 27	Tea, Green.	39301	Windsor Grocery Co., Victoria, B.C.	1 lb.	40	Baird & Co., Vancouver, B.C.	Young Hyson	6 20	35 08	Broken tea leaves	39301
" 27	" Black.	39302	"	1 "	40	"	Broken Orange Pekoe Ceylon.	5 14	34 52	"	39302
" 27	"	39303	Saunders Grocery Co., Ltd., Victoria, B.C.	1 "	25	"	"	5 40	32 08	Broken tea leaves and a few pieces of stem.	39303
" 27	" Green.	39304	"	1 "	50	R. P. Rihet & Co., Victoria, B.C.	Young Hyson	5 64	34 72	Broken tea leaves.	39304
" 28	" Black.	39305	Copas & Young, Victoria, B.C.	1 "	30	Hudson Bay Co., Victoria.	Tetleys Tea	5 24	32 32	"	39305
" 28	"	39306	W. Speed, Victoria, B.C.	1 "	25	W. H. Malkin, Vancouver.	Foochow Congon Tea.	5 40	27 28	"	39306 Extractive low.



BULLETIN No. 183—TEA.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion).	RESULTS OF ANALYSIS.			Number of Sample.	Remarks and Opinion of the Chief Analyst.	
				Quantity.	Cents.			Total Ash	Extrac- tive.	Microscopical Examination.			
DISTRICT OF VICTORIA—D. O'SULLIVAN INSPECTOR—Concluded.													
1909.								cts.	cts.				
April 28	Tea, Black.	39307	E. G. Bailey, Victoria, B.C.	1 "	30	Blomquist, Victoria.	.....	5.60	25.40	Broken tea leaves and pieces of stem.	39307	Extractive low.	
"	"	39308	F. E. Plummer, Victoria, B.C.	1 "	30	J. W. Berry, Van couver.	India & Ceylon Black Tea.	5.48	36.80	Broken tea leaves and some pieces of stem.	39308		
"	"	39309	Fred Carne, Victoria, B.C.	1 "	25	W. A. Jameson Coffee Co., Victoria.	Black Ceylon. "	4.90	34.04	Broken tea leaves. ....	39309		
"	"	39310	Jalland Bros, Victoria, B.C.	1 "	25	R. P. Rithet & Co., Victoria.	The Rajah Ceylon Tea.	5.54	30.80	Broken tea leaves and pieces of stem.	39310		
"	"	39311	Acton Bros., Victoria, B.C.	1 "	35	Braid & Co., Van couver.	Challenge Cup	5.28	34.96	"	39311		
"	"	39312	Wm. B. Hall, Victoria, B.C.	1 "	30	"	.....	5.64	35.44	"	39312		
"	"	39313	W. A. Jameson Coffee Co., Victoria, B.C.	1 "	25	Balfour McLaren, Hamilton, Ont.	.....	4.88	28.52	Broken tea leaves. ....	39313	Extractive low.	
"	"	39314	Harrison & McDonald, Victoria, B.C.	1 "	25	Braid & Co., Van couver.	.....	5.20	30.84	"	39314		
"	"	39315	Vict. Rochdale Co-op. Assoc., Victoria, B.C.	1 "	35	W. H. Malkin, Van couver.	.....	5.48	34.20	Broken tea leaves and pieces of stem.	39315		



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## APPENDIX E.

## BULLETIN No. 184—GROUND GINGER.

OTTAWA, July 16, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report concerning 150 samples of ground ginger, collected throughout Canada in April of the present year.

Previous reports upon ginger are found in Bulletins No. 48 (1896), No. 95 (1904) and No. 137 (1907). The following tabulation of results is interesting:—

	Total samples examined.	PERCENTAGES.		
		Genuine.	Adulterated.	Doubtful.
Bull. 48—1896.....	98	67	28	5
" 95—1904.....	10	60	40	0
" 137—1907.....	30	97	0	3
" 184—1909.....	150	65	21	14

The usual recognized adulteration of ginger consists in the substitution of cheaper materials (flour, starch, &c.) or in the use of exhausted rhizomes, i.e., stock from which the valuable principles have been more or less completely removed by washing. The examinations which form the basis for reports above referred to, have regard primarily to the detection of adulteration as described. But each report contains an account of more or less investigatory work, undertaken in the desire to put on record such data regarding ginger as should, at some future time, enable us to recommend the adoption of a definition of ginger, based upon its physical and chemical constants, and comprehensive enough to warrant its being made legal, under Section 26 of the Adulteration Act.

A definition of ginger recommended by the United States Food Standards Committee, is as follows:—‘Ginger is the washed and dried or decorticated and dried, rhizome of *Zingiber Zingiber* (L) Karst., and contains not less than forty-two (42) per cent of starch, not more than eight (8) per cent of crude fibre, not more than six (6) per cent of total ash, not more than one (1) per cent of lime, and not more than three (3) per cent of ash insoluble in hydrochloric acid.’

‘Limed ginger, bleached ginger, is whole ginger, coated with carbonate of lime, and contains not more than ten (10) per cent of ash, not more than four (4) per cent of carbonate of lime, and conforms in other respects to the standard for ginger.’

The British Pharmacopœia describes ginger as ‘The scraped and dried rhizome of *Zingiber officinale*, Roscoe’; and gives the physical characters of the rhizome; but does not mention ground ginger, nor attempt any enumeration of chemical characters. (Edn 1898). Squire’s Companion (Edn of 1908) gives the following tests for ginger:—The cells contain resin, (and) pyriform compressed starch grains 12 to 40 mcm. long, appearing linear when seen laterally, having the hilum at the smaller end; thin walled, polyzonal parenchymatous cells, and sometimes septate bast fibres with irregularly nodose extremities. When unbleached yields 3 to 4 per cent ash, and 5 per cent should not be exceeded. Not less than 1.5 per cent soluble ash. Extractive matter to cold water usually about 10 per cent and should not be less than 8.5 per cent; the extractive matter soluble in 90 per cent alcohol usually amounts to about 5 per cent and should not be materially below this figure.’



It is apparent, from these citations, that we have but a very vague and indefinite knowledge of ginger ; and it may be well to synopticize the main points brought out by the research work reported in the Bulletins from this laboratory.

*Bulletin No. 48* contains photomicrographic reproductions of genuine and adulterated gingers, magnified 225 diameters, and seen under polarized light. The differences between ginger starch, and such starches as are commonly employed in adulteration of ginger, are well shown.

A synoptical table of published results in the chemical examination of ginger is furnished, and the following conclusion reached. ‘An examination of these results shows that no single component of ginger is sufficiently constant in amount to make the identification of a sample as genuine possible by its means.’

Analytical numbers concerning 98 samples include moisture, cold water extractive, total ash ; and in certain cases, petroleum ether and alcohol extractive, soluble ash, and alkalinity of ash.

Samples are only condemned as adulterated, in cases where foreign starch in amount exceeding 10 per cent is found

*Bulletin No. 95* reports only 10 samples of ground ginger : giving moisture, cold water extractive and results of microscopic examination. One sample is condemned as containing wheat starch. Three others are called in question as giving only 14·1, 15·3, and 14·9 per cent extractive to cold water. These probably contain exhausted ginger, since similar extraction of genuine samples afforded nearly or quite 20 per cent of extractive. But it would be safer to describe these samples as ‘doubtfully genuine’ than as adulterated.

The details for cold water extraction of ginger are given (pp. 24 and 25), and the analyst adds :—‘I have not met with an authenticated sample of ginger which gave less than about 19 per cent of extractive to cold water, when treated as described.’

*Bulletin No. 137* reports upon 30 samples, of which 29 appear to be genuine, as judged by microscopic characters, and the cold water extractive, carried out by the process described above. Extraction amounts to above 20 per cent by weight on the dry ginger, in most samples : and in several reaches 24 per cent.

A consideration of all work recorded for ginger leads to the conclusion that microscopic examination and determination of cold water extractive are quite the most valuable tests that can be applied to the ground ginger of commerce. Determination of ash is rendered comparatively valueless on account of the variability in methods of preparing ginger for the market. The rhizome may be merely washed, or it may be scraped, or decorticated or limed ; and ground ginger may result from the grinding of rhizomes prepared in any or all of these ways. The total ash of 64 samples of ginger, believed to be genuine, reported in *Bulletin 48*, varies from 3·60 per cent to 7·14 per cent.

The ash of ginger consists partly of alkaline carbonates, which are soluble in water : partly of earthy carbonates, sulphates, and phosphates, insoluble in water but easily dissolved by hydrochloric acid, and partly of silicates and sand, insoluble in acid. Extraction of the ginger with water (which is one of the commonest forms of adulteration) has the effect of greatly reducing the amount of soluble ash, yielded by the sample, as shown in the following table :—

EFFECT OF WATER EXTRACTION OF GINGER UPON THE AMOUNT AND CHARACTER OF THE ASH.						
Number of Sample.	Before Extraction.			After Extraction.		
	Total.	Water Soluble.	Ratio.	Total.	Water Soluble.	Ratio
37584.	5·42	2·18	0·40	3·14	0·65	0·21
37587.	4·65	1·98	0·42	2·25	0·30	0·13
39458.	4·59	2·38	0·52	1·38	0·24	0·18
39464.	3·63	1·86	0·51	0·98	0·15	0·15



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A study of these results shows that the total ash is much reduced by previous extraction, as might be expected ; and nearly 70 per cent of the diminution in amount is due to a reduction in water soluble ash.

Number of Sample.	EFFECT OF WATER EXTRACTION OF GINGER UPON THE AMOUNT AND CHARACTER OF THE ASH.		
	Total ash reduced.	Soluble ash reduced.	Ratio p.c.
37584.....	2.28	1.53	69
37587.....	2.40	1.68	70
39458.....	3.21	2.14	67
39464.....	2.65	1.71	65

The samples of ginger upon which this work was done appear to be genuine, as evidenced by the microscopic examination, the cold water extractive, and other characters.

The presence of foreign starches or of flour in ground ginger will naturally reduce the total ash, since the normal ash of flour is less than one-half of one per cent, and that of starch practically nil. The ratio of soluble to total ash will be but little affected by addition of starch to a normal ginger.

In the absence of legal recognition of the value of this ratio in discriminating between normal and exhausted ginger, I am unable to make use of it in judging the genuineness of the samples now reported ; but I have noted all cases where the ratio falls beyond the limits 0.40 to 0.70, as '*abnormal*.' When the total ash exceeds 6 per cent I have noted 'ash high' ; when below 3 per cent I have noted 'ash low.' These terms cannot be regarded as having legal value in establishing the character of the article.

Of course the amount of extractive to cold water will be affected by the method of carrying out the extraction. This is described in Bulletin No. 95, p. 24, as it was employed by me in the work recorded in Bulletins 95 and 137. It involved the use of a mechanical shaker and centrifuge, and genuine gingers yielded about 20 per cent of extractive. The cold water extraction, as now reported, has been made by treating 5 grammes of the sample with 250 cc. of water, in a glass flask, which is shaken by hand at intervals of half an hour during eight hours ; allowed to stand over night when an aliquot part by volume of the solution is evaporated in platinum to constant weight. This method is less effective in exhausting the ginger, but has the advantage of being available in laboratories not equipped with the mechanical devices required for carrying out the first method described. The normal extractive, by this method, appears to be about 15 or 16 per cent of the weight of the ginger (dry).

It is interesting to note that the low extractive recorded in the accompanying table, for certain samples, is usually correlated to the presence of foreign starchy matters. Where a low extractive is not explained by presence of foreign starch, the only explanation available would seem to be the previous extraction of the rhizome.

The requirements of the British Pharmacopœia in the matter of extractive would appear to be entirely too low.

I beg to recommend the publication of this report as Bulletin No. 184.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
Chief Analyst.



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion).
				Quantity.	Cents.		
DISTRICT OF NOVA SCOTIA—							
1909.							
April 14	Ground Ginger.	33902	Larder, Hubley & Co., Halifax, N.S.	3 lb ..	30	Todhunter, Mitchell & Co., Toronto.	
" 14	"	33903	Knock & Nicolle, Halifax, N.S.	3 " ..	21	John P. Mott & Co., Halifax, N.S.	Labelled "Strictly Pure."
" 14	"	33904	R. W. McDonald, Halifax, N.S.	3 " ..	18	Robt. Greig Co., Toronto.	
" 14	"	33905	E. B. Tracey, Halifax, N.S.	3 " ..	24	C. H. Cochrane, Ottawa.	"Pure Jamacia"
" 15	"	33906	Jas. Scott & Co., Halifax, N.S.	3 " ..	30	W. H. Schwartz & Son, Halifax.	
" 15	"	33907	E. Donahoe & Son, Halifax, N.S.	3 " ..	21	"	.. Labelled "Pure"
" 15	"	33908	Dillon Bros., Halifax, N.S.	3 " ..	21	J. P. Mott & Co., Halifax.	Labelled "Strictly Pure."
" 15	"	33909	W. E. Ford, Halifax, N.S.	3 " ..	20	S. H. Ewing, Montreal	Standard ginger.
" 15	"	33910	W. J. Hopgood & Son, Halifax, N.S.	3 " ..	24	W. H. Schwartz & Sons, Halifax.	Labelled "Pure"
" 23	"	33926	S. Thomson, Dartmouth, N.S.	3 " ..	24	Jno. P. Mott & Co., Halifax.	Labelled strictly pure.
DISTRICT OF PRINCE EDWARD ISLAND—							
April 7	Ground Ginger.	31473	R. T. Holman, Ltd., Summerside.	3 lb .	24	Dearborn & Co., St. John, N.B.	Guaranteed absolutely pure.
" 7	"	31474	Brace & McKay, Summerside.	3 " ..	21	Pure Gold Mfg. Co., Toronto.	
" 7	"	31475	McGougan & Wright, Summerside.	3 " ..	24	J. P. Mott & Co., Halifax.	Guaranteed strictly pure.
" 8	"	31476	J. A. Hynes, Kensington.	3 " ..	30	G. E. Barbour & Co., Ltd., St. John, N.B.	"
" 12	"	31477	R. A. McCarthy, Mount Stewart.	3 " ..	24	Carvell Bros., Charlottetown.	"
" 13	"	31478	A. McLean & Co., Georgetown.	3 " ..	24	The Robt. Greig Co., Ltd., Toronto.	Greig's "White Swan" Brand.
" 13	"	31479	J. H. Myrick, Charlottetown.	3 " ..	21	Carvell Bros., Charlottetown.	
" 13	"	31480	W. S. Brown, Charlottetown.	3 " ..	24	W. H. Schwartz & Sons, Halifax.	
" 13	"	31481	M. Duffy & Son, Charlottetown.	3 " ..	30	J. A. Farquharson, Charlottetown.	
" 13	"	31482	Moore & Francham, Charlottetown.	3 " ..	30	N. Rattenbury, Charlottetown.	Perfection brand guaranteed absolutely pure.
DISTRICT OF NEW BRUNSWICK—							
Mar. 23	Ground Ginger.	29907	G. E. Barbour Co., Ltd., St. John, N.B.	3 Pkts	24	Vendors.....	"Acorn" strictly pure Jamacia Ginger.
" 24	"	29908	Chas. A. Clark, St. John, N.B.	3 lb .	30	Dearborn & Co., St. John, N.B.	
April 6	"	29909	Estate of G. T. Whelpley, Fredericton, N.B.	3 Pkts	30	Pure Gold Mfg. Co., Toronto, Ont.	Whelpley's "High Grade" Pure Ginger.



SESSIONAL PAPER No. 14  
GROUND GINGER.

ASH.			RESULTS OF ANALYSIS.					Number of Sample.	Remarks and Opinion of the Chief Analyst.
Total.	Water Soluble	Ratio.	Moisture.	Cold Water Extractive.		Microscope.			
				Normal	Calcu- lated to dry Ginger				

R. J. WAUGH, INSPECTOR.

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
4.67	2.40	.51	9.94	13.08	14.52	Genuine . . . . .	33902	
4.35	2.25	.52	10.02	11.70	13.00	" . . . . .	33903	Extractive low. Doubtful.
3.05	1.57	.51	9.57	13.40	14.82	Wheat, maize, rice, 35 p.c.	33904	Adulterated.
4.82	2.22	.46	10.35	13.20	14.73	Genuine . . . . .	33905	
4.30	2.40	.56	10.26	15.38	17.14	" . . . . .	33906	
4.83	2.69	.56	9.82	14.84	16.46	" . . . . .	33907	
4.37	2.61	.60	9.39	12.95	14.30	" . . . . .	33908	
3.93	1.70	.43	10.11	11.70	13.01	Wheat starch, 25 p.c. ....	33909	Extractive low. Adulterated.
3.93	2.17	.55	9.93	15.68	17.42	Genuine . . . . .	33910	
4.74	2.46	.52	10.49	13.35	14.92	" . . . . .	33926	

THEO. MOORE, INSPECTOR.

4.13	1.81	.44	10.51	10.00	11.17	Genuine . . . . .	31473	Extractive low. Doubtful.
4.84	2.82	.58	9.91	14.02	15.56	" . . . . .	31474	
4.53	2.63	.58	10.60	12.57	14.06	" . . . . .	31475	
5.13	2.56	.50	10.22	14.65	16.32	" . . . . .	31476	
5.39	2.91	.54	9.66	14.00	15.50	" . . . . .	31477	
3.63	2.12	.58	10.36	18.30	20.41	" . . . . .	31478	
6.82	3.13	.46	9.42	15.90	17.55	" . . . . .	31479	
2.91	1.84	.63	10.06	13.15	14.62	Wheat and maize, 30 p.c.	31480	Ash low. Adulterated.
.96	1.73	.58	9.96	13.33	14.80	Maize starch, 15 p.c. ....	31481	Adulterated.
.92	1.66	.42	9.75	10.65	11.80	Genuine . . . . .	31482	Extractive low. Doubtful.

J. C. FERGUSON, INSPECTOR.

3.65	2.44	.67	9.25	16.30	17.96	Genuine. . . . .	29907	
5.20	2.37	.46	9.56	12.84	14.20	" . . . . .	29908	
3.30	2.48	.75	9.80	18.38	20.38	" . . . . .	29909	



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion).
				Quantity.	Cents.		
DISTRICT OF NEW BRUNSWICK—							
1909.							
April 8	Ground Ginger.	29910	D. R. Bedell, Andover, N.B.	3 Pkts	24	G. E. Barbour Co., Ltd., "Acorn"..... St. John, N.B.	
" 10	"	29911	F. D. Sadler, Perth, N.B.	$\frac{3}{4}$ lb ..	30	S. H. Ewing & Sons, 'Prince of Wales' Montreal.	
" 10	"	29912	The Geo. T. Baird Co., Ltd., Perth, N.B.	$\frac{3}{4}$ " ..	24	Dearborn & Co., St. "Perfection".... John, N.B.	
" 14	"	29913	The Sussex Mercantile Co., Ltd., Sussex, N.B.	$\frac{3}{4}$ " ..	21	G. E. Barbour Co., Ltd., "Acorn"..... St. John, N.B.	
" 14	"	29914	Denis Richard, Moncton, N.B.	$\frac{3}{4}$ " ..	24	F. P. Reid & Co., "Pyramid" .... Moncton, N.B.	
" 17	"	29915	S. Williamson, Bathurst, N.B.	$\frac{3}{4}$ " ..	24	H. W. Cole Ltd., St. "Thistle" .... John, N.B.	
" 19	"	29916	B. A. Mowat, Campbellton, N.B.	$\frac{3}{4}$ " ..	19	" .....	
DISTRICT OF QUEBEC—							
April 21	Ground Ginger.	36883	T. Farlardeau, Quebec.	$\frac{3}{4}$ lb ..	30	Langlois & Paradis, .....	
" 21	"	36884	C. T. Boily, Quebec.	3 Pkts	15	" .....	
" 21	"	36885	F. X. Goslin, Quebec	3 " ..	15	H. Blouin, Quebec. ....	
" 21	"	36886	Louis Nadeau, Quebec	$\frac{1}{4}$ lb ..	30	Unknown.. ..	
" 22	"	36887	A. Pouliot, Quebec..	$\frac{3}{4}$ " ..	30	W. Brunette & Cie., .....	
" 22	"	36888	E. Emond, Quebec..	$\frac{3}{4}$ " ..	30	Unknown.. ..	
" 22	"	36889	L. A. Warren, Quebec.	3 Pkts	15	" .....	
" 22	"	36890	Denis Davis, Quebec	$\frac{3}{4}$ lb ..	23	" .....	
" 22	"	36891	A. Turcotte, Quebec.	$\frac{3}{4}$ " ..	23	E. Montreuil, Quebec. ....	
" 22	"	36892	T. E. Gregoire, Quebec.	$\frac{3}{4}$ " ..	30	Drouin & Freres, Quebec. ....	
DISTRICT OF ST. HYACINTHE—							
April 19	Ground Ginger.	1017	T. A. Bourgault, Drummondville.	$\frac{3}{4}$ lb ..	30	Mayell & Co., Toronto .....	
" 20	"	1018	F. X. Giroux, Farnham.	$\frac{3}{4}$ " ..	30	J. A. Mathewson & Co., Montreal.	Pure Jamaica ginger.
" 21	"	1019	R. Goold, St. Jean..	$\frac{3}{4}$ " ..	30	Unknown.....	
" 23	"	1020	W. D. Bradford, Granby.	$\frac{3}{4}$ " ..	22	" .....	
" 23	"	1021	A. Bussiere, Abbotsford.	$\frac{3}{4}$ " ..	25	L. Chaput fils & Cie, Montreal.	Guaranteed pure Jamaica.
" 26	"	1022	H. Ledoux, Beloit..	$\frac{3}{4}$ " ..	23	Hudon & Oreali.....	



## SESSIONAL PAPER No. 14

## GROUND GINGER.

ASH			RESULTS OF ANALYSIS.				Number of Sample.	Remarks and Opinion of the Chief Analyst.
Total.	Water Soluble	Ratio.	Moisture.	Cold Water Extractive.		Microscope.		
				Normal	Calculated to dry (ginger)			

J. C. FERGUSON, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
4.50	2.31	.51	9.76	14.84	16.45	Genuine.....	29910	
4.95	2.37	.48	9.32	13.90	15.33	" .....	29911	
3.76	1.63	.44	9.53	13.05	14.43	" .....	29912	
4.36	2.24	.51	9.66	15.09	16.70	" .....	29913	
4.54	1.99	.44	10.05	13.15	14.62	" .....	29914	
3.48	2.02	.58	9.42	14.77	16.31	Small amount of wheat starch.	29915	Doubtful.
3.47	2.02	.58	10.04	14.72	16.36	" ..	29916	"

## E. BELAND, INSPECTOR.

2.63	0.79	.30	9.98	8.20	9.11	Genuine.....	36883	Ash abnormal, low. Extractive very low. Doubtful.
2.58	0.62	.24	9.91	5.25	5.83	" .....	36884	"
6.95	1.41	.20	8.60	13.41	14.67	" .....	36885	Ash insoluble in HCl.=1.15. Ash abnormal. Ash high. Extractive low. Doubtful.
4.83	2.82	.58	9.12	14.36	15.80	" .....	36886	
3.89	2.30	.59	9.49	16.35	18.06	" .....	36887	
1.82	0.74	.41	10.18	7.20	8.02	Maize starch, 15 p.c.....	36888	Ash low. Extractive low. Adulterated.
2.56	1.09	.42	8.54	5.84	6.38	Foreign matters, much..	36889	"
2.29	0.33	.14	9.65	5.77	6.38	Maize starch, 50 p.c.....	36890	Ash abnormal, low. Extractive low. Adulterated.
2.48	0.74	.30	10.26	7.10	7.91	" 10 p.c.....	36891	Ash abnormal, low. Extractive low. Doubtful.
2.02	0.59	.29	10.25	7.50	8.36	" 30 p.c.....	36892	Ash abnormal, low. Extractive low. Adulterated.

## J. C. ROULEAU, INSPECTOR.

5.00	2.70	.54	9.35	13.50	14.90	Genuine	1017	
5.53	1.64	.29	9.33	13.15	14.51	Wheat starch, 15 p.c.....	1018	Ash abnormal. Adulterated.
3.63	2.53	.69	9.61	17.00	18.81	Genuine .....	1019	
4.68	2.39	.51	8.48	13.80	15.08	"	1020	
3.34	2.50	.75	9.71	15.60	17.28	"	1021	
6.61	0.96	.14	8.70	12.45	13.64	Foreign tissues, not identified.	1022	Ash insol. in HCl.=1.01. Ash abnormal; high. Adult'd.



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion).
				Quantity.	Cents.		
DISTRICT OF ST. HYACINTHE—							
1909.							
April 28	Ground Ginger..	1023	Jos. Hamel, Roxton Falls.	$\frac{3}{4}$ lb ..	27	Hudon & Orsali..	
May 5	" ..	1024	J. E. Blais, E. Sherbrooke.	$\frac{3}{4}$ " ..	30	Herron, Leblanc & Co., Montreal.	
" 6	" ..	1025	W. E. Hetherington, Sherbrooke.	$\frac{3}{4}$ " ..	30	Mayell & Co., Toronto	
" 18	" ..	1026	A. Desmarais, Pierreville.	$\frac{3}{4}$ " ..	20	Unknown.	
DISTRICT OF MONTREAL—							
Mar. 22	Ground Ginger..	40001	J. B. Therein, Montreal.	3 tins.	25	The Brodie Mfg. Co., Montreal.	
" 22	" ..	40002	The Brodie Mfg. Co., Montreal.	1 lb ..	20	Vendors..	
" 27	" ..	40003	J. J. Duffy & Co., Montreal.	3 pkgs	20	" ..	
April 15	" ..	40004	" ..	$\frac{1}{4}$ lb ..	20	" ..	
" 28	" ..	40005	E. Lavigne, Lachute, P.Q.	$\frac{1}{4}$ " ..	30	Thos. Barrow, Shrewsbury.	
" 28	" ..	40006	G. L. Meikle, Lachute, P.Q.	$\frac{3}{4}$ " ..	30	" ..	
May 3	" ..	40007	Heron Leblanc Co., Ltd., Montreal.	$\frac{3}{4}$ " ..	19	Vendors..	
" 6	" ..	40008	C. E. Lathamme, St. Jerome.	$\frac{3}{4}$ " ..	35	Hudon, Hebert & Cie.	
" 12	" ..	40009	A. Martel, Montreal	$\frac{3}{4}$ " ..	30	J. V. Boudrais, Montreal.	
" 12	" ..	40010	A. Genereau, Montreal.	$\frac{3}{4}$ " ..	30	S. H. Ewing & Sons Montreal.	
DISTRICT OF OTTAWA—							
Mar. 19	Ground Ginger..	22926	McCallum & Lahaie, Buckingham.	$\frac{3}{4}$ lb ..	23	White Swan Spice & Cereals Ltd., Toronto	Sold as ground ginger.
" 19	" ..	22927	W. J. Martin, Buckingham.	$\frac{3}{4}$ " ..	23	Unknown.....	" ..
" 22	" ..	22928	G. F. Hodgins, Shawville.	$\frac{3}{4}$ " ..	22	Pure Gold Mfg. Co., Toronto.	" ..
" 23	" ..	22929	A. D. Wishart, Renfrew.	$\frac{3}{4}$ " ..	23	The Fielding Chem. Co., Guelph.	" ..
" 24	" ..	22930	J. E. Duhaime, Ottawa.	$\frac{3}{4}$ " ..	25	Unknown ..	" ..
" 24	" ..	22931	Wm. R. Cummings, Cummings Bridge.	$\frac{3}{4}$ " ..	30	S. J. Major Ltd., Ottawa.	" ..
" 24	" ..	22932	W. Schwitzer, Ottawa.	$\frac{3}{4}$ " ..	22	F. J. Castle Co., Ottawa.	" ..
" 26	" ..	22933	Jas. Herbert, Ottawa	$\frac{3}{4}$ " ..	25	Unknown... ..	" ..
" 26	" ..	22934	M. J. Laverdure, Hull	$\frac{3}{4}$ " ..	30	Pure Gold Mfg. Co., Toronto.	" ..
" 27	" ..	22935	M. Joyce, Quyon, P.Q.	$\frac{3}{4}$ " ..	20	Provost & Allard, Ottawa.	" ..



## SESSIONAL PAPER No. 14

## GROUND GINGER.

ASH.		RESULTS OF ANALYSIS.				Number of Sample.	Remarks and Opinion of the Chief Analyst.	
Total.	Water Soluble	Ratio.	Moisture.	Cold Water Extractive.				Microscope.
				Normal	Calcu- lated to dry ginger			

J. C. ROULEAU, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
10.54	8.49	.80	8.43	16.00	17.47	Foreign matters, 50 p.c..	1023 Ash insol. in HCl. = 0.20. Ash abnormal; high. Adult'd.
2.76	1.23	.45	10.49	12.73	14.22	Maize, starch, &c., 35 p.c.	1024 Ash low. Adulterated.
4.78	2.37	.49	9.83	12.70	14.08	Genuine .....	1025
3.82	1.56	.41	10.16	9.40	10.46	Maize starch, small quantity.	1026 Extractive low. Doubtful.

## J. J. COSTIGAN, INSPECTOR.

2.61	0.87	.33	10.08	7.42	8.25	Maize starch, 20 p.c.....	40001 Ash abnormal; low. Extractive low. Adulterated.
6.77	1.38	.20	9.61	15.50	17.15	Genuine .....	40002 Ash insol. in HCl. = 1.30. Ash abnormal; high.
3.35	1.59	.48	9.50	10.80	11.93	" .....	40003 Extractive low. Doubtful.
3.18	1.96	.62	9.72	12.54	13.89	" .....	40004 " "
1.42	0.54	.38	9.50	6.32	6.98	Very large quantity rice starch and some wheat.	40005 Ash low. Extractive low. Adulterated.
4.15	2.32	.56	9.57	14.03	15.51	Genuine .....	40006
4.17	2.33	.56	9.24	15.18	16.72	" .....	40007
1.48	0.58	.39	9.61	8.05	8.90	Maize starch, 40 p.c.....	40008 Ash low. Extractive low. Adulterated.
4.50	2.70	.60	9.95	11.79	13.10	Foreign matters, rice, &c.	40009 Extractive low. Adulterated.
4.28	2.19	.51	9.29	13.01	14.27	Genuine .....	40010

## J. A. RICKEY, INSPECTOR.

2.74	1.20	.44	10.28	14.69	16.37	Wheat and maize starch, 20 p.c.	22926 Ash low. Adulterated.
4.12	2.76	.67	9.67	16.75	18.54	Genuine.....	22927
5.60	2.39	.43	9.91	14.30	15.87	" .....	22928
4.13	2.97	.72	10.08	16.14	17.95	" .....	22929
2.58	1.07	.41	10.04	7.08	7.87	Maize starch, 40 p.c.....	22930 Ash low. Extractive low. Adulterated.
3.38	1.04	.31	9.96	11.30	12.55	Wheat starch, 30 p.c. and turmeric.	22931 Ash abnormal. Adulterated.
2.67	1.11	.42	10.00	6.90	7.67	Maize starch, 50 p.c.....	22932 Ash low. Extractive low. Adulterated.
3.43	1.06	.31	10.00	11.08	12.31	Wheat starch, 30 p.c. and turmeric.	22933 Ash abnormal. Adulterated.
4.20	2.18	.52	10.02	15.15	16.84	Genuine.....	22934
5.17	2.54	.49	9.68	13.26	14.68	" .....	22935



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion).
				Quantity.	Cents.		

DISTRICT OF KINGSTON—

1909.							
Mar. 17	Ground Ginger..	39456	Geo. Gibson, Kingston.	$\frac{3}{4}$ lb ..	30	White Swan Co., Toronto.	.....
" 17	" ..	39457	J. A. Haffner, Kingston.	$\frac{3}{4}$ " ..	30	Fenwick Hendry Co., Kingston.	.....
" 17	" ..	39458	J. McCulla, Kingston	$\frac{3}{4}$ " ..	30	Todhunter & Mitchel, Toronto.	.....
" 17	" ..	39459	J. Lemmon, Kingston	$\frac{3}{4}$ " ..	23	Unknown.....	.....
" 17	" ..	39460	J. A. Donaldson, Kingston.	$\frac{3}{4}$ " ..	20	" .....	.....
" 17	" ..	39461	A. T. Morris, Kingston.	$\frac{3}{4}$ " ..	20	Dalton, Toronto.....	.....
" 18	" ..	39462	H. M. Stover, Kingston.	$\frac{3}{4}$ " ..	30	A. McLean, Kingston	.....
" 18	" ..	39463	C. Litton, Kingston	$\frac{3}{4}$ " ..	20	C. H. Cochrane & Co., Ottawa.	.....
" 22	" ..	39464	J. Harker, Belleville	$\frac{3}{4}$ " ..	30	White Swan, Toronto.	.....
" 22	" ..	39465	Guillet Bros., Coburg	$\frac{3}{4}$ " ..	38	Grig Co., Toronto....	.....

DISTRICT OF TORONTO—

April 5	Ground Ginger..	36216	W. Durance, Hamilton.	$\frac{3}{4}$ lb ..	25	Young & Winfield, Hamilton.	Ground Ginger..
" 7	" ..	36217	C. C. Baird, Hamilton.	$\frac{3}{4}$ " ..	30	Dalton Bros., Toronto	Jamaica Ginger.
" 8	" ..	36218	T. H. Broad, Aurora	$\frac{3}{4}$ " ..	30	J. M. Lowes Co., Ltd., Toronto.	Pure Jamaica Ginger.
" 8	" ..	36219	Joseph Purdy, Newmarket.	$\frac{3}{4}$ " ..	30	Lumsden Bros, Hamilton.	Fine Family Ginger.
" 12	" ..	36220	W. D. Watson, Bradford.	$\frac{3}{4}$ " ..	30	R. B. Hayhoe & Co., Toronto.	Golden Brand Pure.
" 13	" ..	36221	A. Leadlay, Barrie..	$\frac{3}{4}$ " ..	24	F. E. Ramsay Co., Toronto.	"Horseshoe"....
" 14	" ..	36222	J. E. Paddison, Alliston.	$\frac{3}{4}$ " ..	24	F. W. Humphrey, Toronto.	"Bison".....
" 16	" ..	36223	L. Kennedy, Georgetown.	$\frac{3}{4}$ " ..	22	John Sloan & Co., Toronto.	Sloan's Defiance, Pure.
" 17	" ..	36224	R. Kirkpatrick, Toronto.	$\frac{3}{4}$ " ..	27	R. B. Hayhoe & Co., Toronto.	.....
" 17	" ..	36225	J. Simpson & Son, Toronto.	$\frac{3}{4}$ " ..	23	Pure Gold Mfg. Co., Toronto.	Labelled Ginger.

DISTRICT OF LONDON—

Mar. 26	Ground Ginger..	30596	Oman Mallion, Stratford.	$\frac{3}{4}$ lb ..	23	Canada Grocery Co., London, Ont.	.....
" 26	" ..	30598	Edward O'Flaherty, Stratford.	$\frac{3}{4}$ " ..	30	Edward Adams, London, Ont.	.....
" 26	" ..	30600	A. Beattie & Co., Stratford.	$\frac{3}{4}$ " ..	30	Hamilton Coffee & Spice Co., Hamilton	.....
" 29	" ..	30601	Chas. Andrews, Seaforth.	$\frac{3}{4}$ " ..	30	A. M. Smith & Co., London, Ont.	.....
" 29	" ..	30603	Mathew Williams, Seaforth.	$\frac{3}{4}$ " ..	30	John Slone, Toronto..	.....



SESSIONAL PAPER No. 14

GROUND GINGER.

ASH.			RESULTS OF ANALYSIS.					Number of Sample.	Remarks and Opinion of the Chief Analyst.
Total.	Water Soluble	Ratio.	Moisture.	Cold Water Extractive.		Microscope.			
				Normal	Calcu- lated to dry Ginger				

JAS. HOGAN, INSPECTOR.

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
2.84	1.50	.53	9.69	13.68	15.15	Maize and wheat starch, 15 p.c.	39456	Ash low. Adulterated.
2.82	1.13	.40	10.06	10.80	12.01	Maize and wheat starch, 30 p.c.	39457	" "
4.59	2.38	.52	10.12	14.60	16.24	Genuine.....	39458	
4.23	0.37	.09	9.04	14.35	15.78	Maize and wheat starch, much.	39459	Ash abnormal. Adulterated
4.19	2.10	.50	9.71	12.45	13.79	A little maize starch.....	39460	Doubtful.
3.43	1.27	.37	9.68	11.72	12.97	Genuine.....	39461	Extractive low. Doubtful.
5.51	2.70	.49	9.47	14.73	16.27	" .....	39462	
3.36	2.43	.72	9.41	16.50	18.22	" .....	39463	
3.63	1.86	.51	10.24	16.56	18.45	" .....	39464	
3.73	2.16	.58	10.12	14.80	16.47	" .....	39465	

H. J. DAGER—INSPECTOR.

4.36	2.02	.46	9.55	13.48	14.90	Genuine.....	36216	
2.24	1.31	.59	9.46	10.52	11.62	Maize starch, 40 p.c.....	36217	Ash low. Adulterated.
4.70	2.82	.60	9.54	15.03	16.62	Genuine.....	36218	
3.58	2.21	.62	9.35	16.06	17.72	" .....	36219	
4.04	2.48	.61	10.00	15.05	16.72	" .....	36220	
3.83	1.85	.49	10.03	11.96	13.30	Much maize starch and other foreign matter.	36221	Adulterated.
2.90	1.12	.39	9.29	13.88	15.30	Maize starch, 25 p.c.....	36222	Ash low. Adulterated.
2.27	1.01	.45	9.90	12.75	14.15	" 15 p.c.....	36223	" "
4.34	2.09	.48	9.46	12.66	13.98	Genuine.....	36224	
4.28	2.28	.53	8.85	15.95	17.50	" .....	36225	

T. KIDD, INSPECTOR.

6.20	2.56	.41	10.49	13.82	15.44	Genuine.....	30596	CaO=0.94; Ash insol. in HCL =0.51 Ash high.
4.43	2.41	.54	9.91	13.38	14.85	" .....	30598	
4.52	2.36	.52	10.20	13.58	15.12	" .....	30600	
4.89	2.67	.54	9.86	13.42	14.89	" .....	30601	
3.81	1.37	.36	9.82	11.73	13.01	" .....	30603	Ash abnormal. Doubtful.



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion.)
				Quantity.	Cents.		
DISTRICT OF LONDON—							
1909.							
Mar. 31	Ground Ginger..	30610	Chas. Nairn, Goderich	$\frac{3}{4}$ lb ..	30	Canada Spice Co., London, Ont.	
" 31	" ..	30611	O. C. Whitley, Goderich.	$\frac{1}{2}$ " ..	30	A. M. Smith & Co., London, Ont.	
April 1	" ..	30617	Jas. Cutt, Blyth....	$\frac{1}{4}$ " ..	30	Canada Spice & Grocery Co., London, Ont.	
" 1	" ..	30620	W. Bone, Wingham.	$\frac{1}{4}$ " ..	30	Elliot Marr & Co., London, Ont.	
" 2	" ..	30624	J. H. Christie, Wingham.	$\frac{1}{4}$ " ..	30	Todhunter & Mitchell, Toronto.	
DISTRICT OF WINDSOR—							
April 5	Ground Ginger..	34757	J. Straitch, London	$\frac{3}{4}$ lb ..	30	Gorman, Eckert & Co., London, O.	
" 5	" ..	34763	A. G. Lyons.....	$\frac{1}{4}$ " ..	25	" ..	
" 5	" ..	34765	T. W. Sanborn .....	$\frac{1}{4}$ " ..	30	" ..	
" 5	" ..	34769	Duncan Bros .....	$\frac{1}{4}$ " ..	25	Canada Spice and Grocery Co., London, O.	
" 5	" ..	34770	Cahoon & Patterson.	$\frac{1}{4}$ " ..	30	Gorman, Eckert & Co., London, O.	
" 5	" ..	34771	S. W. Johnston.....	$\frac{1}{4}$ " ..	25	" ..	
" 5	" ..	34772	W. Hayes .....	$\frac{1}{4}$ " ..	25	" ..	
" 5	" ..	34773	G. & O. Bong.....	$\frac{1}{4}$ " ..	20	" ..	
" 6	" ..	34776	Mrs. Geo. Armstrong	$\frac{1}{4}$ " ..	25	Canada Spice and Grocery Co., London, O.	
" 6	" ..	34779	F. C. Toon .....	$\frac{1}{4}$ " ..	25	Gorman, Eckert, & Co., London, O.	
DISTRICT OF MANITOBA—							
April 19	Ground Ginger..	35871	D. Koffman, Winni-peg.	3 pks.	25	Campbell Bros. & Wilson, Winnipeg.	"Royal Shield."
" 19	" ..	35872	W. H. English, Carberry.	$\frac{1}{2}$ lb.	20	Unknown.....	
" 23	" ..	35873	I. L. Raymond, Carman, M.	3 pks.	30	Gorman, Eckert & Co., London, Ont.	
" 26	" ..	35874	A. H. Atkinson, Deloraine, M.	$\frac{1}{4}$ lb ..	20	Unknown .....	
" 26	" ..	35875	Stevens & Son, Deloraine, M.	$\frac{1}{4}$ " ..	30	" ..	
" 27	" ..	35876	The Macleod Hamlin Co., Napinka.	3 pks.	30	The Blue Ribbon, Ltd., Winnipeg.	"Blue Ribbon."
" 27	" ..	35877	Kaiser & Dunning, Napinka.	3 " ..	30	McLaren, Ltd., Hamilton.	"Thistle".....
" 28	" ..	35878	Tessman & Co., Winnipeg.	$\frac{1}{4}$ lb ..	20	Unknown .....	
" 29	" ..	35879	O. Hughes, Winnipeg.	3 pks.	30	The Blue Ribbon, Ltd., Winnipeg.	"Blue Ribbon."
" 29	" ..	35880	Whelpley's Dept. Store, Winnipeg.	3 " ..	30	The White Star Mfg. Co., Winnipeg.	"The White Star."



SESSIONAL PAPER No. 14

GROUND GINGER.

ASH.		RESULTS OF ANALYSIS.					Number of Sample.	Remarks and Opinion of the Chief Analyst.
Total.	Water Soluble	Ratio.	Moisture.	Cold Water Extractive.		Microscope.		
				Normal	Calcu- lated to dry Ginger			

T. KIDD, INSPECTOR—*Conclude l.*

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
3·18	2·14	·67	10·29	15·24	16·99	Genuine.....	30610	
5·08	2·54	50	9·80	14·96	16·58	" .....	30611	
5·79	2·72	·47	10·75	14·90	16·70	" .....	30617	
6·16	3·04	·49	10·44	14·94	16·68	" .....	30620	CaO=0·56: Ash insol. in HCL =0·61 Ash high.
4·23	2·70	·64	9·75	17·65	19·56	" .....	30624	

JNO. TALBOT, INSPECTOR.

3·99	2·68	·67	10·28	14·54	16·20	Genuine .....	34757	
4·02	2·57	·64	10·07	14·05	15·62	" .....	34763	
5·16	2·53	·49	9·92	14·82	16·08	" .....	34765	
5·91	2·70	·46	10·63	14·75	16·50	" .....	34769	
5·07	2·32	·46	10·13	14·62	16·27	" .....	34770	
5·14	2·47	48	10·22	14·33	15·96	" .....	34771	
3·19	2·10	·66	10·12	16·77	18·66	" .....	34772	
4·26	2·41	·56	9·76	14·68	16·27	" .....	34773	
5·83	2·42	·41	10·70	14·17	15·87	" .....	34776	
5·13	2·31	·45	9·97	14·10	15·66	" .....	34779	

A. C. LARIVIERE, INSPECTOR.

3·95	1·72	·44	9·94	13·27	14·73	Genuine .....	35871	
4·11	1·96	·48	9·86	15·61	17·32	" .....	35872	
4·60	2·06	·45	10·32	12·14	13·54	" .....	35873	
3·52	2·06	·59	9·95	13·95	15·50	" .....	35874	
3·97	1·51	·39	9·67	11·75	13·01	Wheat starch, 20 p.c.....	35875	Adulterated.
3·20	2·26	·71	9·25	15·60	17·19	Genuine .....	35876	
5·47	2·72	·49	9·98	13·95	15·50	" .....	35877	
2·43	1·16	·48	9·69	10·50	11·63	Wheat starch, &c., 50 p.c.	35878	Ash low. Extractive low Adulterated.
4·09	2·77	·67	9·43	15·51	17·13	Genuine .....	35879	
5·61	1·91	·34	10·69	11·07	12·40	Foreign matter, rice, &c., 5 p.c.	35880	Ash abnormal. Doubtful.



1 GEORGE V., A. 1911  
BULLETIN No. 184—

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.		
DISTRICT OF CALGARY—							
1909.							
April 21	Ground Ginger.	28974	A. Brandelli, Calgary	3 tins.	30	G. F. & J. Galt, Ltd., Calgary.	.....
" 21	" ..	28975	Golden West Gro- cery, Calgary.	3 " ..	30	" ..	.....
" 21	" ..	28976	W. Maitland, Cal- gary.	3 pks.	30	Unknown .....	.....
" 21	" ..	28977	Hallett & Longdens, Calgary.	3 " ..	30	Georgeson & Co., Ltd., Calgary.	.....
" 22	" ..	28978	People Co-operative Store, Calgary.	3 " ..	30	Unknown ..	.....
" 22	" ..	28979	J. T. Macdonald, Calgary.	3 tins.	25	Dalton Bros., Toronto	.. ..
" 22	" ..	28980	Speer Bros., Calgary	3 " ..	30	Red Feather Co., Hamilton.	.....
" 22	" ..	28981	Watson's Grocery, Calgary.	$\frac{3}{4}$ lb ..	30	Great West Spice Mills, Winnipeg.	.....
" 22	" ..	28982	W. Verrier, Calgary.	3 pks	30	Campbell, Wilson & Horne, Ltd., Calgary	.....
" 22	" ..	28983	McLellan & Hawkes, Calgary.	3 tins.	30	W. V. Moore, Ltd., Calgary.	.....

## DISTRICT OF VANCOUVER—

Mar. 23	Ground Ginger.	37581	Granville Grocery, Vancouver.	3 tins.	30	E. R. Durke & Co., U.S.	.....
" 24	"	37582	R. Schilling, Vancouver.	3 " ..	30	Empress Mfg. Co., Full strength... Vancouver.	.....
" 24	"	37583	Mrs. C. H. Scott, Vancouver.	$\frac{3}{4}$ lb ..	30	Unknown	.....
" 24	"	37584	S. F. McCready, Vancouver.	3 tins.	30	Braid & Co., Van- couver.	Guaranteed absolutely pure.
" 24	"	37585	C. Groth, Vancouver	3 " ..	38	Oriental Mills, Van- couver.	Full strength...
" 24	"	37586	J. McArthur, Vancouver.	$\frac{3}{4}$ lb ..	30	Unknown	.....
" 24	"	37587	J. Donald & Co., Vancouver.	3 tins.	30	Kelly, Douglas & Co., "Columbia" Vancouver.	...
" 24	"	37588	R. Acriman, Vancouver.	$\frac{3}{4}$ lb ..	30	W. H. Malkin, Van- couver.	.....
" 29	"	37634	Adams & Dean, New Westminster.	3 tins.	25	S. Leiser & Co., Victoria.	Guaranteed free from adulterations.
" 29	"	37635	Gunderson & Anne, New Westminster.	$\frac{3}{4}$ lb .	30	Empress Mfg. Co., Vancouver.	.....

## DISTRICT OF VICTORIA—

April 27	Ground Ginger.	39316	Windsor Grocery Co., Victoria, B.C.	3 pks.	30	Pioneer Coffee & Spice Mills, Victoria.	Empire.....
" 27	"	39317	Saunders Grocery Co., Ltd., Victoria, B.C.	3 " ..	30	R. P. Rithet & Co., Victoria.	St. James .....
" 28	"	39318	Copas & Young, Victoria, B.C.	$\frac{3}{4}$ lb ..	30	Victoria Coffee and Spice Mills, Victoria	.....
" 28	"	39319	W. Speed, Victoria, B.C.	3 pks.	30	Blue Ribbon Mfg. Co., Winnipeg.	Blue Ribbon....



SESSIONAL PAPER No. 14  
GROUND GINGER.

ASH.			RESULTS OF ANALYSIS.					Number of Sample.	Remarks and Opinion of the Chief Analyst.
Total.	Water Soluble.	Ratio.	Moisture.	Cold Water Extractive.		Microscope.			
				Normal	Calcu- lated to Dry Ginger				

R. W. FLETCHER, INSPECTOR.

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
3.53	2.43	.69	9.84	16.90	18.75	Genuine . . . . .	28974	
3.45	2.42	.70	9.75	16.75	18.56	" . . . . .	28975	
4.66	2.43	.52	9.42	13.80	15.23	" . . . . .	28976	
5.64	2.78	.49	9.92	12.81	14.22	" . . . . .	28977	
2.00	1.42	.71	9.68	10.08	11.16	Maize starch, 25 p.c. . . . .	28978	Ash low. Adulterated.
2.18	0.98	.45	10.71	12.43	13.92	Maize and wheat starch, 25 p.c. . . . .	28979	" "
4.97	2.74	.55	9.31	15.18	16.74	Genuine . . . . .	28980	
5.32	2.52	.47	9.95	12.46	13.84	" . . . . .	28981	
3.28	1.80	.55	9.58	14.61	16.16	" . . . . .	28982	
2.60	1.31	.50	11.51	11.04	12.47	Maize and wheat starch, 15 p.c. . . . .	28983	Ash low. Adulterated.

J. F. POWER, INSPECTOR.

5.12	2.46	.48	10.30	13.08	14.58	Genuine . . . . .	37581	
4.46	2.06	.46	10.98	14.44	16.22	" . . . . .	37582	
4.92	2.07	.42	9.23	15.36	16.92	" . . . . .	37583	
5.42	2.18	.40	11.68	15.83	17.92	" . . . . .	37584	
7.72	2.62	.34	10.80	14.07	15.77	" . . . . .	37585	CaO=2.76. Ash insol. in HCl. =0.35. Ash abnormal ; high
4.52	1.89	.42	9.65	13.36	14.97	" . . . . .	37586	
4.65	1.98	.43	11.55	14.37	16.25	" . . . . .	37587	
5.62	2.16	.39	9.60	13.62	15.07	" . . . . .	37588	
5.61	2.46	.44	10.80	10.94	12.26	" . . . . .	37634	Low extractive. Doubtful.
5.10	2.02	.39	9.20	14.40	15.86	" . . . . .	37635	

D. O'SULLIVAN, INSPECTOR.

4.29	2.39	.56	11.80	11.00	12.47	Genuine . . . . .	39316	Extractive low. Doubtful.
5.74	1.99	.35	11.05	13.73	15.44	" . . . . .	39317	Ash abnormal.
5.13	2.52	.49	10.30	10.98	12.24	" . . . . .	39318	Extractive low. Doubtful.
3.27	2.36	.72	10.24	16.87	18.80	" . . . . .	39319	



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents		

DISTRICT OF VICTORIA—

1909.							
April 28	Ground Ginger..	39320	Fred Carne, Victoria, B.C.	3 pks.	30	E. R. Durkee & Co., New York, U.S.A.	Gauntlet. ....
" 28	"	39321	Jalland Bros., Victoria, B.C.	Vic- 3 "	30	W. A. Jameson Coffee Co., Victoria.	Victoria.....
" 28	"	39322	Wm. B. Hall, Victoria, B.C.	Vic- 3 "	30	A. Shilling & Co., San Francisco, Cal.	Shilling's Best..
" 28	"	39323	The West End Grocery Co., Ltd., Victoria, B.C.	Gro- 3 bots.	75	Crosse & Blackwell, London, Eng.	.....
" 29	"	39324	W. A. Jameson Coffee Co., Victoria, B.C.	1 lb	25	F. F. Dalley Co., Hamilton, Ont.	.....
" 29	"	39325	E. G. Bailey, Victoria, B.C.	Vic- 3 pks.	30	Empress Mfg. Co., Vancouver, B.C.	Empress .....

NOTE.—The word ‘Genuine,’ under Microscopic Examination, has reference only to the microscopic characteristics. It does not mean that the sample is genuine, except so far as botanical structure is concerned. This would not be materially affected by extraction of the article with cold water.

The percentage of foreign starch, &c., as stated under Microscopic Examination, must be regarded as approximate only. It is estimated by comparing microscopic fields with similar fields of mixtures containing known amounts of foreign material.



SESSIONAL PAPER No. 14

GROUND GINGER.

ASH.			RESULTS OF ANALYSIS.					Number of Sample.	Remarks and Opinion of the Chief Analyst.
Total.	Water Soluble.	Ratio.	Moisture.	Cold Water Extractive.		Microscope.			
				Normal	Calcu- lated to Dry Ginger				

D. O'SULLIVAN, INSPECTOR—*Continued*.

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		
5.40	2.62	.49	10.73	13.15	14.73	Genuine.....	39320
5.78	2.00	.35	11.58	14.55	16.46	" .....	39321 Ash abnormal.
3.47	2.56	.72	12.08	16.84	19.15	" .....	39322
3.24	2.26	.68	10.45	17.87	19.96	" .....	39323
3.93	2.25	.59	9.85	13.44	14.91	" .....	39324
4.28	2.21	.52	12.96	13.92	16.00	" .....	39325



APPENDIX F.

BULLETIN No. 185—INFANT'S AND INVALID'S FOODS.

OTTAWA, July 24, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR :—I have the honour to transmit you herewith a report upon 77 samples of so-called Infant's and Invalid's Foods. The present inspection has regard to a collection ordered in April last, and represents twenty-three (23) different brands. It does not claim to cover all the kinds of Infant's and Invalid's Foods which are found upon the Canadian Market ; but it probably indicates pretty fairly their general character.

The only previous collection of this kind was made in April, 1898. (*See Bull. 59*). At that time, one hundred and three samples (103) representing twenty-two (22) brands, were reported. Ten of these brands are represented in the present collection ; and analysis shows most of these foods to be essentially of the same character as they were found eleven years ago. This is shown in the following table :—

TABLE I.—COMPARISON OF MEAN RESULTS FOR 1898 AND 1909.

Name of Brand.	Mois- ture.	Fat.	Loss to Alcohol.	Loss to Water.	Sum of Losses.	Pro- teids.	Ash.	Starch, &c., Differ- ence.	No. of Samples Examined.
Cardinal Food, 1898.....	9.61	0.64	4.91	2.91	7.82	10.38	1.48	67.35	5
" " 1909.....	7.26	0.42	5.64	3.33	8.94	10.44	0.98	71.91	3
Christies Food, 1898.....	4.22	3.49	27.89	6.00	33.89	7.19	1.05	49.31	5
" " 1909.....	3.70	3.05	28.40	7.25	35.65	6.50	1.00	50.10	1
English Milk Food, 1898.....	5.38	0.57	.....	.....	29.59	10.43	1.06	53.62	2
" " 1909.....	5.60	0.83	19.90	9.85	29.78	8.44	0.77	54.08	2
Wemalta, 1898.....	8.65	0.85	5.90	3.77	9.67	12.18	0.88	63.62	2
" " 1909.....	9.00	1.27	8.55	20.58	29.13	11.75	0.84	48.01	3
Horlick's Malted Milk, 1898.....	2.55	1.41	.....	.....	63.87	14.00	3.57	15.68	9
" " 1909.....	3.13	7.92	50.59	18.28	68.87	14.90	3.55	1.63	8
Lactated Food, 1898.....	5.77	0.48	28.24	4.27	32.90	10.01	2.57	47.72	12
" " 1909.....	6.87	0.38	24.18	6.26	30.44	9.54	1.14	51.75	8
Mellins' Food, 1898.....	4.72	0.30	.....	.....	82.06	10.10	3.50	.....	3
" " 1909.....	4.06	0.74	69.41	10.46	79.92	10.97	3.28	1.03	4
Ridges' Food, 1898.....	8.12	0.48	0.34	4.67	5.02	13.83	0.53	72.01	9
" " 1909.....	8.11	1.91	Trace..	4.36	4.36	11.77	0.51	73.34	4
Nestle's Food, 1898.....	2.18	4.45	39.54	4.30	43.84	10.72	1.60	35.34	9
" " 1909.....	1.67	4.69	49.83	13.03	62.85	12.09	1.51	17.19	8
Robinson's Barley, 1898.....	9.41	0.41	0.65	2.26	2.91	7.46	0.94	78.66	7
" " 1909.....	8.46	1.26	2.69	4.09	6.78	7.25	0.61	75.64	6



## SESSIONAL PAPER No. 14

Exceptions occur in the cases of Wemalta, Horlick's Malted Milk and Nestle's Infant's Foods.

*Wemalta.* The present inspection shows a greatly increased percentage of matters soluble in alcohol and in water; in other words, in sugars and soluble starch. This is a feature which, for invalid's use, gives the food an increased value.

*Horlick's Malted Milk.* The much higher value shown for fat in this report, is doubtless due to improved methods of analysis, rather than to any change in the character of the food. The influence of malt sugar in hindering the extraction of milk fat, was unknown to me at the time of performing the work recorded in Bulletin 59. Dr. R. A. Chittenden, professor of Physiological Chemistry in Yale College, and many other chemists, have underestimated the fat in this class of foods, for the same reason. Direct extraction with dry ether for eight hours, yields less than 2 per cent of fat; while previous dilution to the consistency of milk, permits of the separation of nearly 8 per cent fat.

*Nestle's Milk Food* shows a much higher percentage of matters soluble in alcohol and water than in 1898. This is an improvement probably due to some changes in process of manufacture.

As pointed out in Bulletin 59, the foods now reported fall naturally into two classes distinguished by the amount of unchanged starch present.

If an arbitrary line between these groups be drawn at about 75 per cent of unchanged starch, the following may be described as Farinaceous Foods:

Concentrated Cardinal Food,  
Ridges' Food,  
Robinson's Patent Barley,

Triangle Food,  
Triticumina.

On the other hand, the following foods contain little or no unchanged starch:—

Allenburys' Milk Food No. 1,  
" " " 2,  
Horlick's Malted Milk,

Lacto-Globulin,  
Mellins' Food,  
Wampole's Milk Food.

The remaining foods contain varying amounts of starch from about 7 per cent (Wyeth's Prepared Food) to 50 or 60 per cent.

Most of those foods which are poor in fat are directed to be prepared for use by addition of milk.

It must be said that some of those directed to be prepared with water only, would seem to provide a starvation diet for infants, so far as the fat is concerned; but questions of this kind must be left to be decided by physicians.

I beg to recommend the publication of this report as Bulletin No. 185.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



1 GEORGE V., A. 1911

TABLE II.—INFANTS AND

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Value.	
DISTRICT OF NOVA SCOTIA—						
1909.					\$ c.	
April 15	Infants and Invalids Foods	33937	Jas. D. Walsh, Halifax, N.S.	3 pks.	45	Mathew Robinson, London, Eng.
" 16	"	33938	Brown Bros. & Co., Halifax, N.S.	3 "	75	Wells, Richardson & Co., Burlington, Vt.
" 16	"	33939	Irwin & Sons, Halifax, N.S.	3 "	75	Chas. Martin, Montreal
" 16	"	33940	J. St. Clair, Coombes & Co., Halifax, N.S.	3 " .	1 05	Smith, Klein & French, Philadelphia, U.S.
" 17	"	33941	Nat. Drug and Chem. Co., Halifax, N.S.	3 " .	1 50	Horlicks Malted Milk Co., Racine, Wis., U.S.
DISTRICT OF PRINCE EDWARD ISLAND—						
April 6	Infants and Invalids Foods	31483	G. E. Hughes, Charlottetown.	3 pks.	75	Chas. Martin, Montreal.
" 7	"	31484	A. W. P. Gourlie, Summerside.	3 " .	75	Wells, Richardson & Co., Burlington, Vt.
" 7	"	31485	Edgar Keir, Kensington	3 " .	1 50	G. Mellin, Boston, Mass.
" 7	"	31486	John Knight, Charlottetown.	3 " .	1 50	The Lacto-Globulin Co., Ltd., Montreal.
" 7	"	31487	Johnson & Johnson, Charlottetown.	3 " .	1 05	Ridges Patent Food Co., Ltd., Palmer, Mass.
DISTRICT OF NEW BRUNSWICK—						
Mar. 23	Infants and Invalids Foods	29917	The Nat. Drug and Chem. Co., Ltd., St. Johns, N.B.	3 pks.	60	Keen Robinson Co., Ltd., London, Eng.
" 26	"	29918	The Can. Drug Co., Ltd., St. Johns, N.B.	3 " .	1 50	Allen & Hanbury, Ltd., London, Eng.
April 6	"	29919	A. J. Ryan, Fredericton, N.B.	3 " .	1 50	Henry K. Wampole & Co., Perth, Ont.
" 14	"	29920	The Acadia Drug Co., Moncton, N.B.	3 " .	1 20	Woolrich & Co., Palmer, Mass.
" 19	"	29921	Thomas Wran, Campbellton, N.B.	3 " .	1 00	Wells, Richardson & Co., Montreal.
DISTRICT OF QUEBEC						
April 19	Infants and Invalids Foods	36893	W. Brunnette & Cie, Quebec.	3 pks.	50	Wells-Richardson, Montreal.
" 19	"	36894	L. E. Martel, Quebec...	1½ lb.	1 35	W. Brunnette & Cie, Quebec.
" 19	"	36895	D. R. Gagnon, Quebec...	3 boxes	75	Ed. Morin & Cie, Quebec
" 19	"	36896	V. Giroux, Quebec...	3 " .	1 50	Nat. Drug Co., Montreal
" 20	"	36897	Laroche & Co., Quebec...	3 " .	1 05	Lyman Sons, Montreal.



SESSIONAL PAPER No. 14

## INVALID'S FOOD.

Inspector's Report. (Is not an expression of Opinion).	RESULTS OF ANALYSIS.								Number of Sample.
	Moisture.	Fat, by Pet- role Ether.	Loss to Alcohol.	Loss to Water.	Sum of Losses to Alcohol and water.	Proteids, N x 6.25.	Ash.	Starch, &c., by Differ- ence.	

## R. J. WAUGH, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
"Robinson's Barley"....	8.95	1.25	2.90	4.15	7.05	7.69	0.74	.....	33937
"Lactated Food" .....	6.95	0.42	24.65	5.10	29.65	9.56	1.04	51.38	33938
"Cardinal Food" .....	8.18	0.35	5.50	2.85	8.35	10.50	0.86	71.76	33939
"Eskay's" Albumenized Food.	1.70	4.95	51.30	7.35	58.65	7.25	0.98	26.47	33940
Horlick's Malted Milk...	3.45	8.45	49.00	18.30	67.30	14.88	1.00	1.92	33941

## THEO. MOORE, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
"Cardinal Food" .....	7.12	0.57	5.22	3.87	9.09	10.31	0.98	71.91	31483
"Lactated" .....	6.45	0.50	23.77	6.40	30.17	8.81	1.10	53.00	31484
"Mellins" .....	4.00	0.60	64.75	15.30	80.05	11.56	3.56	0.23	31485
"Lacto-Globulin" .....	9.85	0.65	5.30	6.35	11.65	71.44	8.36	.....	31486
"Ridges" .....	8.80	2.45	.....	4.55	.....	14.38	0.54	.....	31487

## J. C. FERGUSON, INSPECTOR.

Robinson's Patent Barley	8.75	1.25	2.25	4.35	6.60	6.81	0.60	.....	29917
Allenbury's No. 3. ....	2.30	17.75	54.60	8.95	63.55	10.00	3.40	.....	29918
Wampole's Milk Food...	3.75	7.40	55.80	17.40	73.20	11.62	2.46	.....	29919
Ridges Patent Food.....	7.65	1.40	.....	4.75	.....	11.31	0.56	.....	29920
Lactated Food.....	6.80	0.45	22.37	7.05	29.42	9.13	1.20	53.00	29921

## E. BELAND, INSPECTOR.

Lactated .....	6.90	0.30	24.07	7.05	31.12	9.81	1.46	50.41	36893
Allenburys .....	3.30	17.75	54.45	8.60	63.05	10.00	3.56	.....	36894
Robinson's Barley.. . .	8.25	1.15	2.65	3.75	6.40	7.44	0.54	.....	36895
Allenburys .....	3.00	16.70	53.95	9.90	63.85	10.00	3.86	.....	36896
Ridges Food..... . . .	8.25	1.45	Trace...	3.65	3.65	10.94	0.40	.....	36897



1 GEORGE V., A. 1911

TABLE II.—INFANT'S AND

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Value.	
DISTRICT OF ST. HYACINTHE—						
1909.					\$ c.	
April 19	Infants and Invalids Foods	1028	D. Hebert, Drummond-ville.	3 tins.	1 50	Unknown.....
" 21	" "	1029	Dr. Guy, St. Jean.....	3 "	1 50	Allen & Hanbury, London, Eng.
" 26	" "	1030	P. H. Hebert, Village St., Hilaire.	2 "	30	Lyman's, Ltd., Montreal
May 6	" "	1031	F. D. Hewitt, Sherbrooke	3 "	75	Nat. Drug, Montreal...
" 25	" "	1032	Raymond Frères, St. Hyacinthe.	3 "	75	Christie, Brown & Co. Toronto.
DISTRICT OF MONTREAL—						
Mar. 27	Infants and Invalids Foods	40026	J. M. Aird, Montreal...	3 tins.	75	Vendor .....
" 27	" "	40027	J. J. Weinfeld, Montreal	3 "	75	Weir Specialty Co., Toronto.
" 27	" "	40028	" "	3 "	1 50	Allen & Hanbury, Ltd., London, Eng.
" 27	" "	40029	Lyman's, Ltd., Montreal	3 "	1 16	Henri Nestle, Vevey Switzerland.
" 27	" "	40030	" "	3 "	1 25	Horlick's Malted Milk Co.
DISTRICT OF OTTAWA						
Mar. 19	Infants and Invalids Foods	22936	Dr. Wallace, Buckingham.	3 pks.	1 50	Lyman Sons & Co., Montreal.
" 24	" "	22937	Jos. P. Valiquette, Ottawa	3 tins.	1 20	Unknown. ....
" 26	" "	22938	E. D. Story, Ottawa....	3 "	1 50	" .....
" 26	" "	22939	E. R. DesRosiers, Ottawa	3 "	1 50	" .....
" 26	" "	22940	Estate W. H. Roger, Ottawa.	3 bots	1 50	Wampole's, Perth, Ont.
DISTRICT OF KINGSTON—						
Mar. 18	Infants and Invalids Foods	39466	W. W. Gibson, Kingston	3 tins.	1 35	Nat. Drug Co.. . . . .
" 23	" "	39467	F. C. Clark, Belleville ..	3 "	1 50	Allen & Hanbury's, London, Eng.
" 23	" "	39468	R. Templeton, Belleville	3 "	1 50	Horlick's Malted Milk .
" 22	" "	39469	C. J. Webster, Cobourg.	3 "	1 05	Weir Specialty Co., Toronto.
" 23	" "	39470	J. D. Tully, Peterboro..	3 "	1 50	Horlick's Malted Milk



SESSIONAL PAPER No. 14

## INVALID'S FOOD.

## RESULTS OF ANALYSIS.

Inspector's Report. (Is not an expression of Opinion).	Moisture.	Fat, by Pet- rolic Ether.	Loss to Alcohol.	Loss to Water.	Sum of Losses to Alcohol and Water.	Proteids, N x 6.25.	Ash.	Starch, &c., by Differ- ence.	Number of Sample.
J. C. ROULEAU, INSPECTOR.									
Nestle's .....	1.60	4.82	50.55	14.30	64.85	12.50	1.40	...	1028
Allenburys .....	3.10	17.95	54.65	8.35	63.00	10.12	3.50	...	1029
Prepared groats .....	5.50	7.00	3.70	4.70	8.40	13.94	1.06	64.10	1030
Cardinal food .....	6.50	0.35	6.20	3.27	9.47	10.50	1.12	72.06	1031
Christies .....	3.70	3.05	28.40	7.25	35.65	6.50	1.00	50.10	1032

## J. J. COSTIGAN, INSPECTOR.

"Triticumina" .....	5.62	1.58	1.20	5.10	6.30	12.88	0.50	73.12	40026
"Wemalta" .....	9.30	1.20	9.25	19.55	28.80	10.69	1.06	.....	40027
"Allenbury's No. 1.....	2.70	16.75	55.60	8.65	64.25	10.00	3.60	.....	40028
"Nestle's" .....	1.50	4.25	51.23	10.57	61.80	12.00	1.42	.....	40029
"Horlick's Malted Milk"	3.20	8.35	50.75	17.30	68.05	15.31	3.90	1.19	40030

## J. A. RICKEY, INSPECTOR.

"Wyeth's prepared food"	3.00	1.30	46.00	22.30	68.30	14.69	3.50	7.21	22936
"Nestle's" Food .....	1.68	4.47	51.33	11.78	63.10	11.19	1.40	.....	22937
"Horlick's Malted Milk"	3.45	7.32	50.90	17.65	68.55	14.94	3.70	.....	22938
Lacto-Globulin ; a pure albumen.	9.05	0.85	7.97	4.92	12.89	72.62	8.20	.....	22939
Wampole's Milk Food...	3.35	7.10	55.60	15.70	71.30	14.18	2.64	.....	22940

## JAS. HOGAN, INSPECTOR.

Nestle's .....	0.76	4.34	51.02	12.88	63.90	12.06	...	...	39466
Allenburys .....	3.15	15.55	53.40	11.65	65.05	8.94	3.54	.....	39467
Horlicks .....	3.35	7.60	52.05	18.25	70.30	14.96	3.40	.....	39468
Wemalta .....	8.85	1.25	7.30	21.60	28.90	12.25	0.68	.....	39469
Horlicks .....	2.90	8.15	49.90	20.10	70.00	14.69	3.80	...	39470



1 GEORGE V., A. 1911

TABLE II—INFANT'S AND

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.
				Quantity.	Value.	
DISTRICT OF TORONTO—						
1909.					\$ c.	
April 7	Infants and Invalids Foods	36196	B. Griffin, Hamilton.....	3 pks.	75	Triangle Food Co., Hamilton.
" 10	" "	36197	Blaicher & Reche, Hamilton.	"	75	The Ontario Chemists M'fg. Co., Hamilton..
" 13	" "	36198	Geo. Monkman, Barrie..	"	120	Lyman Bros. Co., Ltd., Toronto.
" 14	" "	36199	E. B. Schell, Alliston...	"	100	Allen & Hanbury Ltd., London, Eng.
" 20	" "	36260	Weir Specialty Co., Ltd., Toronto.	"	84	Vendors.....
DISTRICT OF LONDON—						
Mar. 25	Infants and Invalids Foods	30591	Alex. Stewart, Guelph..	3 pks.	90	Lyman Bros., Toronto ..
" 25	" "	30593	Walter Beattie, Guelph	"	75	Winer & Co., Hamilton.
" 26	" "	30595	O. H. Meyers, Stratford.	"	75	C. S. Nasmyth, Stratford.
" 29	" "	30604	Jno. A. Roberts, Seaforth.	"	100	Unknown.....
" 29	" "	30607	W. S. R. Holmes, Clinton.	"	100	Drug Trading Co., Toronto.
" 31	" "	30608	S. E. Hick, Goderich....	3 cans	75	Unknown.....
" 31	" "	30609	Jas. Wilson, Goderich ..	2 "	100	J. Winer & Co., Hamilton.
DISTRICT OF WINDSOR—						
April 8	Infants and Invalids Foods	34784	W. T. Strong, London, Ont.	3 tins.	1 50	Neaves Food Co., England.
" 8	" "	34785	Anderson & Nelles, London, Ont.	"	1 50	Lacto Globulin, Montreal
" 14	" "	34799	E. C. Harvey, St. Thomas.	3 pks.	1 50	Horlicks Malted Milk Co. Racine, Wis.
" 14	" "	35901	T. H. Duncombe, St. Thomas.	"	1 50	Allenbury Milk Food Co.
" 15	" "	35911	W. T. Rapley & Co., Strathroy.	"	75	Wells Richardson Co., Montreal.
DISTRICT OF MANITOBA—						
April 14	Infants and Invalids Foods	35866	The Lincoln Park Drug Hall, Winnipeg.	3 pks.	1 35	Allen & Hanbury, Ltd., London.
" 14	" "	35867	Gillespie & Campbell, Winnipeg.	"	90	Allen & Hanbury, Ltd., London.
" 14	" "	35868	Thornton Andrews, Winnipeg.	"	1 50	The Dom. Drug Co., Hamilton.
" 14	" "	35869	Harrison's Drug Store, Winnipeg.	"	1 15	Henri Nestle, Vevey, Switzerland.
" 14	" "	35870	E. A. Mitchell & Co., Winnipeg.	"	1 50	Wampole & Co., Perth..



SESSIONAL PAPER No. 14  
INVALID'S FOOD.

Inspector's Report. (Is not an expression of Opinion.)	RESULTS OF ANALYSIS.								Number of Sample.
	Moisture.	Fat. by Pet- rolic Ether.	Loss to Alcohol.	Loss to Water.	Sum of Losses to Alcohol and Water.	Proteids, N x 6.25.	Ash.	Starch, &c., by Differ- ence.	

## H. J. DAGER, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.
Triangle Food.....	7.35	1.70	1.20	2.55	3.75	12.25	0.70	74.25	36196
English Milk Food, Malted	5.75	0.70	20.40	9.90	30.30	8.38	0.92	53.95	36197
Ridges Food.....	7.75	2.35	Trace ..	4.50	4.50	10.44	0.54	.....	36198
Allenbury's No. 3. ....	4.00	1.25	8.85	15.10	23.95	10.94	0.60	.....	36199
Wemalta.....	8.85	1.35	9.10	20.60	29.70	12.31	0.78	.....	36260

## T. KIDD, INSPECTOR.

Allenburys .....	4.66	1.26	9.64	10.20	19.84	10.50	.....	.....	30591
Lactated. ....	6.70	0.40	27.97	4.20	32.17	11.06	1.40	49.39	30593
Mellins.....	4.70	0.85	73.75	5.00	78.75	10.44	2.74	2.52	30595
Nestle's.....	2.90	5.35	45.45	13.60	59.06	12.50	1.74	.....	30604
Robinsons Barley.....	8.05	1.40	2.55	4.20	6.75	7.63	0.62	.....	30607
English Milk Food.. ....	5.46	0.95	19.45	9.80	29.25	8.50	0.62	55.22	30608
Horlicks ... ..	3.55	7.70	47.80	19.55	67.35	14.88	4.00	.....	30609

## JNO. TALBOT, INSPECTOR.

Neaves Food.....	4.00	0.75	16.75	8.40	25.15	12.06	0.46	57.58	34784
Lacto-Globulin .....	9.45	0.97	8.25	5.65	13.80	71.06	8.00	....	34785
Horlicks.....	3.35	7.00	53.55	15.85	69.40	14.19	2.70	.....	34799
Allenburys. ....	3.25	17.35	55.65	8.00	63.65	10.00	3.94	.....	35901
Lactated.....	6.95	0.45	22.15	6.57	28.72	9.50	1.04	53.34	35911

## A. C. LARIVIÈRE, INSPECTOR.

Allenbury's No. 2.....	3.40	15.80	53.80	12.65	66.45	9.44	3.80	.....	35866
Allenbury's No. 3.....	3.90	1.74	9.40	13.02	22.42	10.88	.....	.....	35867
Babys Own.....	6.55	1.05	7.65	15.15	22.80	9.63	0.58	59.39	35868
Nestle's.....	1.12	4.40	50.88	12.30	63.18	13.13	1.56	.....	35869
Wampoles.....	2.53	7.20	57.15	16.75	73.90	12.43	2.44	.....	35870



1 GEORGE V., A. 1911

TABLE II.—INFANT'S AND

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Value.	
DISTRICT OF CALGARY—						
1909.					\$ c.	
April 16	Infants and Invalids Foods	28984	McCutcheon & McGill, Calgary.	3 tins.	1 50	Allan & Hanbury, Ltd., London, Eng.
" 16	" "	28985	C. A. Wallace, Ca'gary.	3 "	1 50	Lacto-Globulin Co., Ltd., Montreal.
" 16	" "	28986	W. MacLean "	3 "	1 05	Keen, Robinson & Co. Ltd., London, Eng.
" 16	" "	28987	Curry & Cope "	3 "	1 50	Bengers Food Ltd., Manchester, Eng.
" 16	" "	28988	Oliver Bros. "	3 "	1 05	Smith, Kline & French Co., Philadelphia, U.S.
DISTRICT OF VANCOUVER						
Mar. 23	Infants and Invalids Foods	37576	J. W. Morrow, Van-couver.	3 tins.	1 50	Henderson Bros., Van-couver
" 23	" "	37577	Woods Pharmacy, Van-couver.	3 "	1 50	Horlick Malted Milk Co., Racine, U.S.
" 23	" "	37578	McDowell & Burns, Van-couver.	3 bots.	3 00	W. K. Wampole, Phila-delphia, U.S.
" 23	" "	37579	Wm. Harrison Drug Co., Vancouver.	3 "	1 50	Mellins Food Co., Ltd. London, Eng.
" 23	" "	37580	Red River Drug Store, Vancouver.	3 pkgs.	1 50	Wells, Richardson & Co., Burlington, Vt.
DISTRICT OF VICTORIA—						
May 11	Infants and Invalids Foods	39326	F. J. Williams, Victoria, B.C.	3 pkgs	1 50	Leeming, Miles & Co., Montreal.
" 11	" "	39327	Dean & Hiscocks, Vic-toria, B.C.	3 "	75	Henderson Bros., Vic-toria, B.C.
" 11	" "	39328	Wm. Jackson & Co., Victoria, B.C.	3 "	1 50	" "
" 12	" "	39329	D. E. Campbell, Vic-toria, B.C.	3 "	1 50	Mellins Food Co., Boston, Mass.
" 11	" "	39330	John Cochrane, Victoria, B.C.	3 "	1 50	Allen, Hanbury, Ltd. London, Eng.



SESSIONAL PAPER No. 14  
INVALID'S FOOD.

Inspector's Report. (Is not an expression of Opinion).	RESULTS OF ANALYSIS.							Number of Sample.
	Moisture.	Fat, by Pet- rolic Ether.	Loss to Alcohol.	Loss to Water.	Sum of Losses to Alcohol and Water.	Proteids, N x 6.25.	Ash.	

R. W. FLETCHER, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
Allenburys . . . . .	3.20	15.45	55.90	10.30	66.20	10.00	3.80		28984
Lacto-Globulin. . . . .	9.27	0.70	6.10	5.95	12.03	74.62	8.22		28985
Robinson's Barley. . . . .	8.25	1.05	2.93	3.20	6.23	6.94	0.50		28986
Bengers Food. . . . .	6.60	1.30	6.40	27.05	33.45	11.19	0.90	46.56	28987
' Eskay's ' . . . . .	1.45	4.73	46.70	12.13	58.80	7.00	1.14	26.88	28988

J. F. POWER, INSPECTOR.

Nestle's . . . . .	1.44	4.46	47.38	15.48	62.86	11.56	1.80		37576
Horlicks Malted Milk. . . . .	1.80	8.80	50.80	19.20	70.00	15.31	2.90		37577
Wampole's. . . . .	2.40	7.45	55.70	19.30	75.00	11.81	2.68		37578
Mellins . . . . .	4.00	0.70	70.00	9.85	79.85	11.12	3.42	0.91	37579
Lactated . . . . .	7.65	0.30	23.75	7.05	30.80	9.00	1.00	52.20	37580

D. O'SULLIVAN, INSPECTOR.

Nestle's . . . . .	2.40	5.40	50.80	13.20	64.00	11.81	1.24		39326
Robinson's Barley. . . . .	8.50	1.45	2.85	4.80	7.65	7.00	0.62		39327
Lactated . . . . .	6.60	0.30	24.77	6.70	31.47	9.44	0.88	51.31	39328
Mellins . . . . .	3.55	0.80	69.15	11.70	81.05	10.75	3.40	0.45	39329
Allenbury's No. 1. . . . .	2.65	16.75	54.65	9.80	64.45	10.12	3.86		39330



TABLE III.  
ALLENBURY'S MILK FOOD, No. 1.

Serial Number.	Departmental Number.	Moisture.	Fat--by Petrolie Ether.	Loss to Alcohol.	Loss to Water.	Sum of Losses to Alcohol and Water.	Proteids--N. 6.25.	Ash.	Starch, &c., by Difference.	Remarks.
1	29918	2.30	17.75	54.60	8.95	63.55	10.00	3.40	.....	Directions require water only to be added in preparing for use.
2	36894	3.30	17.75	54.45	8.60	63.05	10.00	3.56	.....	
3	36896	3.00	16.70	53.95	9.90	63.85	10.00	3.86	.....	
4	1029	3.10	17.95	54.65	8.35	63.00	10.12	3.50	.....	
5	40028	2.70	16.75	55.60	8.65	64.25	10.00	3.60	.....	
6	39330	2.65	16.75	54.65	9.80	64.45	10.12	3.86	.....	
7	35901	3.25	17.35	55.65	8.00	63.65	10.00	3.94	.....	
Means..		2.90	17.28	54.79	8.89	63.68	10.03	3.68	2.43	

ALLENBURY'S MILK FOOD, No. 2.

8	39467	3.15	15.55	53.40	11.65	65.05	8.94	3.54	.....	Directions require wa- ter only to be added in preparing for use.
9	35806	3.49	15.80	53.80	12.65	66.45	9.44	3.80	.....	
10	28984	3.20	15.45	55.90	10.30	66.20	10.00	3.80	.....	
Means..		3.25	15.60	54.36	11.53	65.90	9.46	3.71	1.98	

ALLENBURY'S MALTED FOOD, No. 3.

11	35867	3.90	1.74	9.40	13.02	22.42	10.88	.....	.....	Milk is used in prepar- ing this food for use according to direc- tions.
12	30591	4.66	1.26	9.64	10.20	19.84	10.50	.....	.....	
13	36190	4.00	1.25	8.85	15.10	23.95	10.94	0.60	.....	
Means..		4.19	1.42	9.30	12.77	22.07	10.77	0.60	60.95	

BABY'S OWN FOOD.

14	35868	6.55	1.05	7.65	15.15	22.80	9.63	0.58	59.39	Directions require ad- dition of varying amounts of milk.
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BENGER'S FOOD.

15	28987	6.60	1.30	6.40	27.05	33.45	11.19	0.90	46.56	Is directed to be used along with milk, which supplies the fat required.
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CONCENTRATED CARDINAL FOOD.

16	33939	8.18	0.35	5.50	2.85	8.35	10.50	0.86	71.76	
17	31483	7.12	0.57	5.22	3.87	9.09	10.31	0.98	71.91	
18	1931	6.50	0.35	6.20	3.27	9.47	10.50	1.12	72.06	
Means..		7.26	0.42	5.64	3.33	8.94	10.44	0.98	71.91	

CHRISTIE'S INFANT'S FOOD.

19	1932	3.70	3.05	28.40	7.25	35.65	6.50	1.00	50.10	Is directed to be pre- pared with water only.
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SESSIONAL PAPER No. 14

TABLE III.  
ENGLISH MILK FOOD—MALTED.

Serial Number.	Departmental Number.	Moisture.	Fat by Petrolic Ether.	Loss to Alcohol.	Loss to Water.	Sum of losses to Alcohol and Water.	Proteids— N. $\times$ 6.25.	Ash.	Starch, &c., by Difference.	Remarks.
20	36197	5.75	0.70	20.40	9.90	30.30	8.38	0.92	53.95	Directed to be prepared with milk.
21	30608	5.46	0.95	19.45	9.80	29.25	8.50	0.62	55.22	
Means..		5.60	0.83	19.90	9.85	29.78	8.44	0.77	54.08	

## ESKAY'S ALBUMENIZED FOOD.

22	33940	1.70	4.95	51.30	7.35	58.65	7.25	0.98	26.47	Is directed to be used along with milk, to supply fat, &c.
23	25988	1.45	4.73	46.70	12.13	58.80	7.00	1.14	26.88	
Means		1.58	4.84	49.00	9.74	58.73	7.13	1.06	26.68	

## HORLICK'S MALTED MILK.

24	33941	3.45	8.45	49.00	18.30	67.30	14.88	4.00	1.92	Prepared for use with water only; but cream may be added if desired, according to directions on the label.
25	40030	3.20	8.35	50.75	17.30	68.05	15.31	3.90	1.19	
26	22938	3.45	7.32	50.90	17.65	68.55	14.94	3.70	...	
27	39468	3.35	7.60	52.05	18.25	70.30	14.96	3.40	...	
28	39470	2.90	8.15	49.90	20.10	70.00	14.69	3.80	...	
29	30609	3.55	7.70	47.80	19.55	67.35	14.88	4.00	...	
30	34799	3.35	7.00	53.55	15.85	69.40	14.19	2.70	...	
31	37577	1.80	8.80	50.80	19.20	70.00	15.31	2.90	...	
Means.		3.13	7.92	50.59	18.28	68.87	14.90	3.55	1.63	

## LACTO-GLOBULIN.

32	31486	9.85	0.65	5.30	6.35	11.65	71.44	8.36	.....	Prepared for use with water only; but milk, &c., may be added.
33	22939	9.05	0.85	7.97	4.92	12.89	72.62	8.20	.....	
34	34785	9.45	0.97	8.25	5.65	13.80	71.06	8.00	.....	
35	28985	9.27	0.70	6.10	5.95	12.05	74.62	8.22	.....	
Means.		9.40	0.79	6.90	5.72	12.59	72.44	8.19	.....	

NOTE.—The factor 6.25 used for converting nitrogen to proteids is an approximate factor only, and lead to notable error in the case of this food, which contains about 70 per cent of proteid material.

## LACTATED FOOD.

36	33938	6.95	0.42	24.65	5.10	29.65	9.56	1.04	51.38
37	31484	6.45	0.50	23.77	6.40	30.17	8.81	1.10	53.00
38	29921	6.80	0.45	22.37	7.05	29.42	9.13	1.20	53.00
39	36893	6.90	0.30	24.07	7.05	31.12	9.81	1.46	50.41
40	30593	6.70	0.40	27.97	4.20	32.17	11.06	1.40	49.39
41	35911	6.95	0.45	22.15	6.57	28.72	9.50	1.04	53.34
42	37580	7.65	0.30	23.75	7.05	30.80	9.00	1.00	52.20
43	39328	6.60	0.30	24.77	6.70	31.47	9.44	0.88	51.31
Means.		6.87	0.38	24.18	6.26	30.44	9.54	1.14	51.75



TABLE III.  
MELLIN'S FOOD.

Serial Number.	Departmental Number.	Moisture.	Fat by Petrolie Ether.	Loss to Alcohol.	Loss to Water.	Sum of Losses to Alcohol and Water.	Proteids—N x 6.25.	Ash.	Starch, &c., by Difference.	Remarks.
44	31485	4.00	0.60	64.75	15.30	80.05	11.56	3.56	0.23	Sample 30595 had been wrapped in paper, and was not in good condition when analysed. This food is directed to be prepared with milk, to supply fat, &c.
45	30595	4.70	0.85	73.75	5.00	78.75	10.44	2.74	2.52	
46	37579	4.00	0.70	70.00	9.85	79.85	11.12	3.42	0.91	
47	39329	3.55	0.80	69.15	11.70	81.05	10.75	3.40	0.45	
	Means.	4.06	0.74	69.41	10.46	79.92	10.97	3.28	1.03	

NEAVE'S FOOD.

48	34784	4.00	0.75	16.75	8.40	25.15	12.06	0.46	57.58	Directed to be used with milk.
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NESTLE'S FOOD.

49	1028	1.60	4.82	50.55	14.30	64.85	12.50	1.40	.....	Directed to be used without milk.
50	40029	1.50	4.25	51.23	10.57	61.80	12.00	1.42	.....	
51	22937	1.68	4.47	51.33	11.78	63.10	11.19	1.40	.....	
52	39466	0.76	4.34	51.02	12.88	63.90	12.06	.....	.....	
53	30604	2.90	5.35	45.45	13.60	59.06	12.50	1.74	.....	
54	35869	1.12	4.40	50.88	12.30	63.18	13.13	1.56	.....	
55	37576	1.44	4.46	47.38	15.48	62.86	11.56	1.80	.....	
56	39326	2.40	5.40	50.80	13.20	64.00	11.81	1.24	.....	
	Means.	1.67	4.69	49.83	13.03	62.85	12.09	1.51	17.19	

PREPARED GROATS.

57	1030	5.50	7.00	3.70	4.70	8.40	13.94	1.06	64.10	For making a gruel.
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RIDGE'S FOOD.

58	31487	8.80	2.45	.....	4.55	.....	14.38	0.54	.....	Is directed to be prepared for use with milk.
59	29920	7.65	1.40	.....	4.75	.....	11.31	0.56	.....	
60	36897	8.25	1.45	trace...	3.65	3.65	10.94	0.40	.....	
61	36198	7.75	2.35	"	4.50	4.50	10.44	0.54	.....	
	Means.	8.11	1.91	trace...	4.36	4.36	11.77	0.51	73.74	

ROBINSON'S PATENT BARLEY.

62	33937	8.95	1.25	2.90	4.15	7.05	7.69	0.74	.....	Is directed to be prepared with milk, which supplies the fat.
63	29917	8.75	1.25	2.25	4.35	6.60	6.81	0.60	.....	
64	36895	8.25	1.15	2.65	3.75	6.40	7.44	0.54	.....	
65	30607	8.05	1.40	2.55	4.20	6.75	7.63	0.62	.....	
66	28986	8.25	1.05	2.93	3.30	6.23	6.94	0.50	.....	
67	39327	8.50	1.45	2.85	4.80	7.65	7.00	0.62	.....	
	Means.	8.46	1.26	2.69	4.09	6.78	7.25	0.61	75.64	



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TABLE III.  
TRIANGLE FOOD.

Serial Number.	Departmental Number.	Moisture.	Fat by Petrolic Ether.	Loss to Alcohol.	Loss to Water.	Sum of losses to Alcohol and Water.	Proteids-- N. x 6.25.	Ash.	Starch, &c., by Difference.	Remarks.
68	36196	7.35	1.70	1.20	2.55	3.75	12.25	0.70	74.25	Directed to be prepared with milk.

TRITICUMINA.

69	40026	5.62	1.58	1.20	5.10	6.30	12.88	0.50	73.12	Directed to be used with milk.
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WAMPOLE'S MILK FOOD.

70	29919	3.75	7.40	55.80	17.40	73.20	11.62	2.46	.....	
71	22940	3.35	7.10	55.60	15.70	71.30	14.18	2.64	.....	
72	35870	2.53	7.20	57.15	16.75	73.90	12.43	2.44	.....	
73	37578	2.40	7.45	55.70	19.30	75.00	11.81	2.68	.....	
	Means.	3.00	7.29	55.85	17.29	73.14	12.51	2.55	1.51	

WEMALTA.

74	40027	9.30	1.20	9.25	19.55	28.80	10.69	1.06	.....	Is directed to be prepared with water only.
75	39469	8.85	1.25	7.30	21.60	28.90	12.25	0.68	....	
76	36260	8.85	1.35	9.10	20.60	29.70	12.31	0.78	....	
	Means.	9.00	1.27	8.55	20.58	29.13	11.75	0.84	48.01	

WYETH'S PREPARED FOOD.

77	22936	3.00	1.30	46.00	22.30	68.30	14.69	3.50	7.21	
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## APPENDIX G.

## BULLETIN No. 186—FERTILIZERS AS SOLD, 1909.

OTTAWA, September 10, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report upon 66 samples of fertilizers, obtained by our inspectors upon the open market in May and June of the present year. This is in accordance with the requirements of Section 6 of the Fertilizers Act (R.S. 1906, Chap. 132).

The usual difficulties have been met with in identification of brands, and 9 samples are either not identified, or doubtfully so. Sixteen (16) samples are not registered for 1909, as the Act requires; or, if registered, are not described so as to be certainly identified.

It is to be hoped that the difficulty of identification referred to will disappear with the coming into force of the New Fertilizer Act, which takes effect with the beginning of the new year (1910).

Thirty-eight (38) samples have been found up to the guaranteed values. This number includes two samples which, although not registered for 1909, were labelled with a guarantee percentage. Two samples are adjudged as 'nearly up to guarantee'; the deficiency being but little more than one (1) per cent of potash, in each case.

Two other samples show a decided excess of potash, above the amount guaranteed.

There remain three samples which show decidedly lower content of potash than the guarantee calls for. These are as follows:—

No.	POTASH.	
	Guaranteed.	Found.
33969.....	10·00	3·15
36730.....	10·00	7·67
36294.....	8 00	4 95

On investigation it is found that these samples were taken from the top of the bag, they therefore indicate imperfect mixing rather than any intentional lowering of potash content.

I beg to recommend the publication of this report as Bulletin No. 186; and may add, for the information of parties interested that the text of the new Fertilizers Act is contained in Bulletin 182 (Standard Fertilizers, 1909) which will be mailed on request.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



1 GEORGE V., A. 1911  
BULLETIN No. 186—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Fur- nisher, as given by the Vendor.	Name of Analyst.
				Quantity.	Cents.		

## DISTRICT OF NOVA SCOTIA—

1909.							
May 12..	Scotia Basic Slag..	33962	R. A. Beckwith, Amherst, N.S.	5 lb.	...	Alex. Cross & Sons, Glasgow, Scotland.	Bowman...
" 13..	Phosphate of Lime (Slag).	33963	E. H. & R. Cross, Truro, N.S.	5 lb.	....	Leeds Phosphate Works, Leeds, England.	" ...
" 13..	Potato Manure....	33964	A. J. Walker & Son, Truro, N.S.	5 lb.	10	Swift's Lowell Fert. Co., Lowell, Mass.	" ...
" 13..	" .....	33965	E. E. McNutt, Truro, N.S.	5 lb.	....	Pidgeon Fertilizer Co., Windsor, N.S.	" ...
" 14	X L Brand.....	33966	E. Hebb, Bridgewater, N.S.	5 lb.	....	Bradley Co., Boston, Mass.	" ....
" 14..	Stockbridge Manure.	33967	W. O. Bates, Bridgewater, N.S.	5 lb.	...	Bowker Fert. Co., Boston, Mass.	" ....
" 17	Pacific Guano. ...	33968	G. Roy, Kentville, N.S.	5 lb.	....	Pacific Guano Co., Boston, Mass.	" ....
" 18..	G E High Grade Manure.	33969	C. O. Allen, Kentville, N.S.	5 lb.	....	Am. Agr. Chem. Co., New York.	" ...
" 18..	Square Brand, Bone and Potash	33970	Burgess & Co., Wolfville, N.S.	5 lb.	....	Bowker's Fert. Co., Boston, Mass.	" ....
" 21	Potato Phosphate.	33971	Halifax Seed Store, Halifax, N.S.	5 lb.	15	Nova Scotia Fert. Co., Halifax, N.S.	" ...
June 18..	Basic Slag, 20% Phosphate.	33972	S. B. Chute, Berwick, N.S.	5 lb.	...	Pilson, Scotland.	" ...
" 18..	Acrostock Complete Manure.	33973	C. O. Cook & Son, Waterville, N.S.	5 lb.	....	Am. Agr. Chem. Co., New York.	" ...
" 18..	Bone Dust.....	33974	B. E. Ward, Weston, N.S.	5 lb.	...	J. T. Dow, Boston, Mass.	" ....
" 18..	Ground Bone	33975	T. H. Morse, Berwick, N.S.	5 lb.	....	New England Fert. Co., Boston, Mass.	" ....



SESSIONAL PAPER No. 14

## FERTILIZERS AS SOLD.

Register Number.	Samples.	RESULTS OF ANALYSIS.						Potash.	Moisture.	Relative Value per ton of 2,000 lbs.	Nuner of Sample.	Remarks and Opinion of the Chief Analyst.				
		Nitrogen.		Phosphoric Acid.												
		Total, including that of Nitric Acid or Ammo- nia, if present.	Total, calculated as Am- monia.	Soluble in Water.	Reverted or Citrate, Soluble.	Insoluble.	Total.									
													Total Available.			

R. J. WAUGH, INSPECTOR.

		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	\$ c.	
2374	Guarantee..						16 00				33962	
	Stand. Bull. 182..				15 18	6 62	21 80	15 18		0 20	18 68	
	As found .....				11 10	4 70	15 80	11 10		0 51	13 62	Up to guarantee.
....	Guarantee.....										33963	
	Stand. Bull. 182..											
	As found .....				11 85	4 65	16 50	11 85		0 25	14 43	Not registered for 1909.
2304	Guarantee..	1 65	2 00				8 00	7 00	4 00		17 61	33964
	Stand. Bull. 182..	1 61	1 95	4 75	2 60	0 80	8 15	7 35	4 24	6 85	18 51	
	As found .....	2 31	2 81	3 60	3 65	1 00	8 25	7 25	3 29	14 75	19 78	Up to guarantee.
....	Guarantee.....										33965	
	Stand. Bull. 182..											
	As found .....	1 67	2 04	4 10	3 30	1 20	8 60	7 40	3 40	16 50	17 99	Not registered for 1909.
2318	Guarantee..	2 06	2 50	5 00	3 00	2 00	10 00	8 00	1 50		18 40	33966
	Stand. Bull. 182..	2 13	2 58	6 75	3 45	2 25	12 45	10 20	1 60	11 25	21 41	
	As found .....	2 37	2 89	3 80	3 78	2 42	10 00	7 58	1 94	18 00	19 44	Up to guarantee.
2406	Guarantee..	3 30	4 00				7 00	6 00	10 00		28 12	33967
	Stand. Bull. 182..	3 50	4 25	5 90	1 96	1 19	9 05	7 86	8 90	9 25	30 39	
	As found .....	3 28	3 99	3 90	2 08	1 32	7 30	5 98	8 43	12 50	26 95	Nearly up to guarantee.
....	Guarantee.....										33968	
	Stand. Bull. 182..											
	As found .....	2 65	3 23	3 10	4 58	3 52	11 20	7 68	2 00	14 00	20 82	Not registered for 1909.
2376	Guarantee..	3 20	4 00	4 00	2 00	1 00	7 00	6 00	10 00		28 18	33969
	Stand. Bull. 182..	3 39	4 11	6 45	1 98	1 20	9 63	8 43	8 90	8 15	30 70	
	As found .....	2 79	3 40	5 95	3 58	2 97	12 50	9 53	3 15	10 50	24 55	Low in potash, sample taken from top of bag.
2413	Guarantee..	1 65	2 00				7 00	6 00	2 00		14 51	33970
	Stand. Bull. 182..	1 85	2 24	6 20	3 65	3 35	13 20	9 85	1 95	10 05	20 70	Up to guarantee.
	As found .....	2 72	3 32	3 95	3 25	2 25	9 45	7 20	1 89	14 00	20 12	
2384	Guarantee..	1 65	2 00			2 00	9 00	7 00	4 00		17 91	33971
	Stand. Bull. 182..	2 38	2 89	7 90	1 64	0 84	10 38	9 54	7 35	9 25	26 98	
	As found .....	2 79	3 49	2 85	4 03	2 22	9 10	6 88	3 20	12 25	21 20	"
....	Guarantee.....										33972	
	Stand. Bull. 182..											
	As found .....				13 75	6 65	20 40	13 75		0 11	17 12	Not registered for 1909.
2380	Guarantee.....	2 40	3 00	5 00	1 00	1 00	7 00	6 00	10 00		25 56	33973
	Stand. Bull. 182..	2 38	2 89	3 67	3 39	3 54	10 60	7 06	9 21	8 50	26 50	
	As found .....	2 72	3 32	3 45	3 83	1 57	9 15	7 58	8 73	11 50	26 80	Up to guarantee, Bag labelled with guarantee.
....	Guarantee.....	1 65	2 00				24 00					33974
	Stand. Bull. 182..											
	As found .....	3 36	4 08		17 78	6 02	23 80	17 78		6 25	32 79	Up to guarantee, but not registered for 1909.
2317	Guarantee.....	2 47	3 00				23 00					33975
	Stand. Bull. 182..	2 45	2 98		19 25	8 15	27 40	19 25		4 25	31 95	
	As found .....	3 28	3 99		17 60	5 15	22 75	17 60		5 50	32 06	Up to guarantee.



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Fur- nisher, as given by the Vendor.	Name of Analyst
				Quantity.	Cents.		
DISTRICT OF PRINCE EDWARD ISLAND—							
1909.							
May 13..	Fertilizer.....	31498	A. Horn & Co., Charlottetown.	5 lb.	10	Swift's Lowell Fert. Co., Boston, Mass.	Bowman....
" 13.	" .....	31499	" .....	5 lb.	10	" .....	" ....
" 13..	" .....	31500	" .....	5 lb.	10	" .....	" ..
DISTRICT OF NEW BRUNSWICK—							
April 30..	Imperial Super- phosphate.	29994	Ira B. Kierstead, St. John, N.B.	5 lb.	15	Prov. Chem. Fert. Co., Ltd., St. John, N.B.	Bowman. ..
May 4..	10% Complete Aroostook Po- tato.	29995	" .....	5 lb.	15	" .....	" ....
" 6..	Swift's Lowell Po- tato Manure.	29996	P. Nase & Son, St. John, N.B.	5 lb.	15	Swift's Lowell Fert. Co., Boston, Mass.	" ....
" 7..	Bradley's Potato Fertilizer.	29997	J. S. Gibbon & Co., St. John, N.B.	5 lb.	15	Am. Agr. Co., Bradley's Fert. Works, Boston, Mass.	" ....
" 17.	P. & P. Potato Grower with 10% Potash.	29998	George T. Baird Co., Ltd., Perth, N.B.	5 lb.	15	Parmenter & Polsey Fert. Co., Boston, Mass.	" ....
" 26..	Bowker's 6% Po- tato Fertilizer.	29999	D. J. Seely & Son, St. John, N.B.	5 lb.	15	The Bowker Fert. Co., Boston, Mass.	" ...
DISTRICT OF QUEBEC—							
April 26..	Complete Manure.	36728	Julien & Vézina, 1230 Rue St. Val- ier, Quebec.	5 lb.	15	The Am. Agr. Works, Dr. Donald. Buffalo.	
" 26..	Thomas' Phos- phate.	36729	" .....	5 lb.	15	Unknown.....	" ..
" 26..	Fruit and Vine....	36730	P. T. Légaré, Que- bec.	5 lb.	15	Michigan Carbon Works, Detroit.	" ..
" 26..	Victor..	36731	" .....	5 lb.	15	J. F. Higginson & Son, Buckingham.	" ..



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Register Number.	Samples.	RESULTS OF ANALYSIS.						Remarks and Opinion of the Chief Analyst.
		Total, including that of Nitric Acid or Ammo- nia, if present. Total, calculated as Am- monia.	Soluble in Water.	Phosphoric Acid.			Total Available.	
				Reverted or Soluble.	Insoluble.	Total.		
		No. of Sample.						

THEO. MOORE, INSPECTOR.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
...	Guarantee....										31498	
	Stand. Bull. 182											
	As found.....	3.63	4.42	3.95	5.40	1.70	4.05	9.35	3.81	8.75	27.34	Unregistered or not identified.
....	Guarantee....										31499	
	Stand. Bull. 182											
	As found.....	2.31	2.81	4.30	3.70	1.22	9.20	8.00	3.10	11.25	20.55	" ..
....	Guarantee..										31500	
	Stand. Bull. 182											
	As found .....	2.51	3.06	3.65	2.91	0.52	7.05	6.56	4.13	11.25	20.40	" ..

J. C. FERGUSON, INSPECTOR.

2403	Guarantee.....	2.97	3.61				8.50		2.53			29994	
	Stand. Bull. 182..	2.80	3.40	6.75	0.64	0.46	7.85	7.39	2.37	15.15	18.70		
	As found.....	2.79	3.40	3.70	4.20	1.50	9.40	7.90	4.53	9.70	23.53		Up to guarantee.
2399	Guarantee..	3.17	3.84				7.97		9.28			29995	
	Stand. Bull. 182..	3.37	4.10	6.65	0.48	0.42	7.55	7.13	10.71	8.65	30.80		
	As found .....	3.71	4.51	5.20	0.28	1.02	6.50	5.48	8.07	10.50	27.54		Nearly up to guarantee.
2304	Guarantee.....	1.65	2.00				8.00	7.00	4.09		17.61	29996	
	Stand. Bull. 182..	1.61	1.95	4.75	2.60	0.80	8.15	7.35	4.21	6.85	18.51		
	As found .....	2.79	3.40	3.65	3.58	1.12	8.35	7.23	6.40	8.50	24.54		Up to guarantee.
2319	Guarantee..	2.06	2.50	5.00	3.00	2.00	10.00	8.00	3.00		19.90	29997	
	Stand. Bull. 182..	1.91	2.34	7.10	3.55	2.35	13.00	10.65	2.77	13.90	22.39		
	As found .....	3.14	3.83	4.50	3.68	3.12	11.30	8.18	3.10	14.50	24.16		"
....	Guarantee.....											29998	
	Stand. Bull. 182												
	As found .....	3.21	3.91	4.40	2.10	1.25	7.75	6.50	8.55	8.50	27.43		Not registered for 1909.
2415	Guarantee..	0.82	1.00				7.00	6.00	6.00		15.69	29999	
	Stand. Bull. 182..	1.12	1.36	4.93	3.82	2.55	11.30	8.75	5.11	14.24	19.80		
	As found .....	2.09	2.55	4.20	2.87	2.68	9.75	7.07	5.94	13.75	22.05		Up to guarantee.

E. BELAND, INSPECTOR.

2361	Guarantee.....	2.06	2.50	6.00	2.00	1.00	9.00	8.00	3.00		19.70	36728	
	Stand. Bull. 182..	1.82	2.21	5.25	3.88	1.65	10.78	9.13	3.59	8.40	20.84		
	As found .....	2.25	2.73	5.74	3.11	1.40	10.25		2.73	12.96	21.11		Up to guarantee.
....	Guarantee.....											36729	
	Stand. Bull. 182												
	As found .....				12.61	6.40	19.61			0.12	15.79		Not registered for 1909, or not identified.
2362	Guarantee.....	1.65	2.00	6.00	2.00	1.00	9.00	8.00	10.00		25.31	36730	
	Stand. Bull. 182..	1.57	1.90	6.75	2.23	1.87	10.85	8.98	10.92	9.95	27.37		
	As found .....	1.38	1.67	6.53	2.68	2.89	12.10		7.67	14.04	24.01		Lowinpotash, sample taken from top of bag.
2299	Guarantee..	1.65	2.00				7.00		3.00			36731	
	Stand. Bull. 182..	2.69	3.26	6.25	1.12	1.35	9.00	7.77	3.70	6.20	21.98		
	As found .....	1.73	2.13	2.39	2.85	2.89	8.13		2.03	5.18	15.18		Up to guarantee.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Fur- nisher, as given by the Vendor.	Name of Analyst.
				Quantity.	Cents.		
DISTRICT OF ST. HYACINTHE—							
1909.							
May 26..	Soluble Pacific Guano.	38846	Albert Taylor & Co., P.Q. Waterloo,	5 lb.	....	The Am. Ag. Chem. Co., New York.	Dr. Donald.
" 26..	Victor .....	38847	Hayes & Marches- sault, West Shef- ford.	5 lb.	....	Capelton Chem. & Fert. Co., Buckingham.	" ..
" 27 .	Scotia Phosphate Powder.	38848	L. Nadeau, Sabre- vois.	5 lb.	....	Cross & Sons, Ltd., Glas- gow, mfrs., Wm. Ewing & Co., Montreal, frs.	" ..
DISTRICT OF MONTREAL—							
May 1..	Bradley's B... ..	40056	Wm. Anderson, 3 jrs Herdmans, P.Q.	....	....	....	Dr. Donald.
" 1..	Alkaline Bone with Potash.	40057	" " .. 3 jrs	....	....	Am. Agr. Chem. Co.....	" ..
" 1..	Bradley's Potato.	40058	" " .. 3 jrs	....	....	....	" ..
" 1 .	Wilson's Special Bean and Grain.	40059	" " .. 3 jrs	....	....	....	" ..
" 5 .	Sure Growth.....	40060	Wm. Ewing & Co., 3 jrs 146 McGill St., Montreal.	....	....	W. A. Freeman & Co.,	" ..
" 5	Potato Manure....	40091	" " .. 3 jrs	....	....	" " ..	" ..
" 5 .	Crocker's Complete Manure.	40092	Wm. Rennie Co., 3 jrs Ltd., McGill St., Montreal.	....	....	....	" ..
DISTRICT OF OTTAWA--							
May 28..	Sure Growth Man- ure.	41241	K. McDonald & Sons, Ottawa.	3 lb.	15	The W. A. Freeman Co., Ltd., Hamilton, Ont.	Dr. Donald
" 28..	Royal Canadian...	41242	Graham Brothers, Ottawa.	3 lb.	10	Capelton Chemical & Fert. Co., Buckingham.	" ..
" 28..	Pure Bone Meal...	41243	" " .. 3 lb.		9	The W. A. Freeman Co., Ltd., Hamilton.	" ..



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Register Number.	Samples.	RESULTS OF ANALYSIS.							Remarks and Opinion of the Chief Analyst
		Nitrogen.		Phosphoric acid					
		Total, including that of Nitric Acid or Ammo- nia, if present.	Total, calculated as Am- monia.	Soluble in Water.	Reverted or Citrate, Soluble.	Insoluble.	Total.	Total Available.	
	</								

J. C. ROULEAU, INSPECTOR.

		p. c.	p.c.	p.c.	p. c.	p.c.	p.c.	p.c.	p.c.	p.c.	S. c.	
2330	Guarantee.....	2.06	2.50	5.00	3.00	2.00	10.00	8.00	1.50	...	18.40	38846
	Stand. bull. 182..	1.86	2.26	6.70	3.38	2.02	12.10	10.08	1.55	11.50	20.24	.....
	As found .....	1.93	2.34	4.97	2.99	2.88	10.84	.....	2.16	14.11	18.83	.....
2299	Guarantee.....	1.65	3.00	.....	.....	.....	7.00	.....	3.00	.....	.....	38847
	Stand. bull. 182..	2.69	3.26	6.25	1.12	1.35	9.12	7.77	3.70	6.20	21.98	.....
	As found .....	1.51	1.83	2.97	3.42	2.18	8.57	...	3.43	4.22	16.50	.....
....	Guarantee*.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38848
	Stand. bull. 182..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	As found .....	.....	.....	.....	8.02	6.22	14.24	.....	.....	0.15	10.69	.....
												Up to guarantee; guarantee furnished by the inspector, from bag.
												Up to guarantee, but not registered for 1909.

J. J. COSTIGAN, INSPECTOR.

....	Guarantee.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40056
	Stand. Bull. 182..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	As found .....	1.01	1.22	6.09	2.63	1.49	10.21	.....	4.34	11.07	19.32	.....
2339	Guarantee.....	.....	6.00	5.00	1.00	12.00	11.00	2.00	.....	15.00	40057	.....
	Stand. Bull. 182..	0.21	0.25	10.00	2.98	2.82	15.80	12.98	1.80	12.15	18.63	.....
	As found .....	0.28	0.34	7.62	2.06	1.95	11.63	.....	2.32	11.43	15.27	.....
2319	Guarantee....	2.06	2.50	5.00	3.00	2.00	10.00	8.00	3.00	.....	19.90	40058
	Stand. Bull. 182..	1.91	2.34	7.10	3.55	2.35	13.00	10.65	2.77	13.90	22.39	.....
	As found .....	2.00	2.43	5.10	3.00	2.20	10.30	.....	2.60	12.84	19.43	.....
....	Guarantee.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40059
	Stand. Bull. 182..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	As found .....	0.31	0.37	8.28	1.59	1.76	11.63	.....	7.80	9.38	21.07	.....
2285	Guarantee.....	2.89	3.50	.....	.....	.....	8.00	.....	3.00	.....	.....	40060
	Stand. Bull. 182..	3.28	3.98	2.30	7.43	2.12	11.85	9.73	3.50	15.00	26.22	.....
	As found .....	3.29	3.99	2.95	5.42	1.85	10.22	.....	3.99	14.77	25.13	.....
2283	Guarantee....	2.47	3.00	.....	.....	.....	8.00	.....	5.00	.....	.....	40091
	Stand. Bull. 182..	3.02	3.67	2.08	7.15	1.97	11.20	9.23	6.75	13.95	27.97	.....
	As found .....	2.84	3.45	2.42	5.52	1.28	9.22	.....	8.26	15.32	27.28	.....
2355	Guarantee.....	0.82	1.00	6.00	2.00	1.00	9.00	8.00	4.00	.....	16.49	40092
	Stand. Bull. 182..	1.05	1.28	6.73	1.20	3.27	11.20	7.93	3.77	11.15	17.72	.....
	As found .....	1.06	1.29	6.07	2.10	1.31	9.48	.....	3.95	12.74	17.54	.....
												Up to guarantee..

J. A. RICKEY, INSPECTOR

2285	Guarantee..	2.89	3.50	.....	.....	.....	8.00	.....	3.00	.....	.....	41241
	Stand. Bull. 182..	3.28	3.98	2.30	7.43	2.12	11.85	9.73	3.50	15.00	26.22	.....
	As found .....	3.18	3.86	3.39	5.31	1.84	10.54	.....	3.91	13.61	25.18	.....
2297	Guarantee.....	3.29	4.00	.....	.....	.....	9.00	.....	5.00	.....	.....	41242
	Stand. Bull. 182..	4.12	5.00	9.65	0.17	1.30	11.12	9.82	6.27	10.15	32.44	.....
	As found .....	3.04	3.69	3.53	1.12	2.85	7.50	..	6.95	6.17	23.61	.....
2279	Guarantee.....	2.47	3.00	.....	.....	.....	23.00	.....	.....	.....	.....	41243
	Stand. Bull. 182..	3.00	3.64	.....	18.80	6.50	25.30	18.80	.....	11.00	32.83	.....
	As found .....	2.60	3.16	.....	15.08	10.46	26.54	.....	.....	6.30	28.57	.....
												Up to guarantee .

\* 30 to 35 per cent phosphate.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Name of Analyst.
				Quantity.	Cents.		

DISTRICT OF KINGSTON—

1909.							
May 4...	High Grade Pot-ash.	41141	Earl Spencer, Pic-ton.	5 liv	10	Am. Agr. Chem. Co., Buf-falo.	F.X.Valade.
" 4...	Complete Fertil-izer.	41142	" " "	5 liv	10	" " "	" ..
" 4...	B. D. Sea Fowl Guano.	41143	" " "	5 liv	10	" " "	" ..
" 4...	New Method Fer-tilizer.	41144	" " "	5 liv	10	" " "	" ..

DISTRICT OF TORONTO—

May 6...	Crocker's N. Y. Special Phos-phate.	36294	R. Moore & Son, Welland.	5 liv	15	Am. Agr. Chem. Co., Buf-falo, N.-Y.	F.X.Valade.
" 6...	Crocker's Best Pot-ash Compound.	36295	Titherington Bros., St. Catharines.	5 liv	15	" " "	" ..
" 7...	Sure Growth.....	36296	The Steele Briggs Seed Co., Ltd., Hamilton.	5 liv	20	W. A. Freeman Fert. Works, Hamilton.	" ..
" 11...	Farm and Garden Manure.	36297	Wm. Rennie Co., Ltd., Toronto.	5 liv	10	Vendors.....	" ..
" 20...	Queen City Lawn Fertilizer.	36298	The Steele Briggs Seed Co., Ltd., Toronto.	5½ liv	50	The Am. Agr. Chem. Co., Boston, Mass,	" ..

DISTRICT OF LONDON—

May 12. .	Bone Meal...	30677	James Heever & Son, Guelph.	3 liv	15	W. A. Freeman, Hamil-ton.	Dr. Donald.
" 12...	" " .....	30678	W. B. Doughty, Guelph.	3 liv	15	J. A. Simmers, Toronto..	" ..
" 13...	" " .....	30681	John Byers, Strat-ford.	2 liv	10	John A Bruce, Hamilton.	" ..



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Register Number.	Samples.	RESULTS OF ANALYSIS.							Remarks and Opinion of the Chief Analyst.	
		Nitrogen.		Phosphoric Acid.						
		Total, including that of Nitric Acid or Ammo- nia, if present.	Total, calculated as Am- monia.	Soluble in Water.	Reverted or Citrate, Soluble.	Insoluble.	Total.	Total Available.		

JAS. HOGAN, INSPECTOR.

		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	\$ c.		
2352	Guarantee.....	1 65	2 00	6 00	2 00	1 00	9 00	8 00	10 00		25 31	41141	
	Stand. Bull. 182..	1 58	1 92	7 15	1 08	2 02	10 25	8 23	10 79	9 90	26 54		
	As found .....	2 12	2 57	6 98	1 38	1 43	9 79	8 36	9 98	5 51	26 61		Up to guarantee.
2363	Guarantee.....	1 65	2 00	6 00	2 00	1 00	9 00	8 00	4 00		19 31	41142	
	Stand. Bull. 182..	1 83	2 23	6 45	2 56	1 72	10 73	9 01	4 49	12 15	21 78		
	As found .....	2 40	2 91	7 21	1 79	1 90	10 90	9 00	9 76	11 44	29 11		Much above guarantee in potash.
2359	Guarantee.....	2 06	2 50	6 00	2 00	1 00	9 00	8 00	1 50		18 20	41143	
	Stand. Bull. 182..	2 13	2 58	6 45	3 01	1 87	11 33	9 46	1 63	11 65	20 48		
	As found .....	2 29	2 78	5 80	2 21	2 71	10 72	8 01	2 30	13 33	25 09		Up to guarantee.
2358	Guarantee.....	0 82	1 00	6 00	2 00	1 00	9 00	8 60	2 00		14 49	41144	
	Stand. Bull. 182..	1 09	1 33	7 48	1 80	2 22	11 50	9 28	2 13	7 80	17 46		
	As found .....	1 27	1 54	6 06	2 16	2 39	10 61	8 22	3 13	16 27	17 81		"

H. J. DAGER, INSPECTOR.

2353	Guarantee.....			8 00	2 00	1 00	11 00	10 00	8 00		29 10	36294	
	Stand. Bull. 182 ..			7 65	2 25	1 25	11 15	9 90	7 76	6 00	19 79		
	As found .....	0 17	0 21	9 79	1 98	1 91	13 68	11 77	4 95	13 56	20 03		Potash low, sample taken from top of bag.
2352	Guarantee.....	1 65	2 00	6 00	2 00	1 00	9 00	8 00	10 00		25 31	36295	
	Stand. Bull. 182 ..	1 58	1 92	7 15	1 08	2 02	10 25	8 23	10 79	9 90	26 54		Up to guarantee.
	As found .....	2 07	2 51	7 73	1 75	2 13	11 61	9 48	8 50	10 75	27 38		
2285	Guarantee.....	2 89	3 50				8 00		3 00			36296	
	Stand. Bull. 182 ..	3 28	3 98	2 36	7 43	2 12	11 85	9 73	3 50	15 00	26 22		
	As found .....	3 55	4 31	1 24	5 84	3 22	10 30	7 08	3 58	5 12	24 53		"
	Guarantee.....											36297	
	Stand. Bull. 182 ..												
	As found .....	4 12	5 00	tr'ce	6 97	4 26	11 23	6 97	0 69	3 90	23 64		Not registered for 1909, or not identified.
	Guarantee.....											36298	
	Stand. Bull. 182 ..												
	As found .....	4 89	5 94	3 04	2 42	2 71	8 17	5 46	3 27	10 26	27 02		" " "

T. KIDD, INSPECTOR.

2279	Guarantee.....	2 47	3 00				20 00					30677	
	Stand. Bull. 182..	3 00	3 64		18 80	6 50	25 30	18 80		11 00	32 83		
	As found .....	2 78	3 37		14 36	10 80	25 16			7 97	28 49		Up to guarantee.
	Guarantee.....											30678	
	Stand. Bull. 182 ..												
	As found .....	4 50	5 46		14 30	9 30	23 60			6 52	33 82		Not registered for 1909.
	Guarantee.....											30681	
	Stand. Bull. 182 ..												
	As found .....	3 36	4 36		10 17	9 58	19 75			5 56	25 48		" " "



1 GEORGE V., A. 1911  
BULLETIN No. 186—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Name of Analyst.
				Quantity.	Cents.		
DISTRICT OF WINDSOR—							
1909.							
April 26..	Bone Meal .....	35917	R. Hookway & Son, London.	3bts	....	Freeman Fert. Works, F. X. Valade Hamilton.	
" 26.	" .....	35918	Darch & Hunter, London.	3bts	....	Michigan Carbon Works, Detroit.	" ..
" 27..	Fertilizer .....	35919	J. H. McMeechan, London.	3bts	....	London Fert. Works, London.	" ..
" 27..	Celery and Early Vegetable Manure.	35920	A. M. Hamilton & Son.	3bts	....	W. A. Freeman, Hamilton.	" ..
DISTRICT OF VANCOUVER—							
April 29..	Fertilizer B. ....	37676	Brackman, Ker Milling Co., New Westminster.	5 lb.	25	Victoria Chem. Co., Victoria, B.C.	C. Fagan...
" 30..	Bone Meal ....	37677	Rennie Co., Ltd., Vancouver.	5 lb.	25	Brackman, Ker Milling Co., Vancouver.	" ..
" 30..	Fish Guano .....	37678	Brackman, Ker Milling Co., Vancouver.	5 lb.	20	B. C. Oilery, Vancouver.	" ..
May 1..	Blood and Bone..	37679	Brown Bros., Vancouver.	5 lb.	25	Vendors.	" ..
" 1..	Muriate of Potash.	37680	M. J. Henry, Vancouver.	5 lb.	25	Victoria Chem. Co., Victoria.	" ..
DISTRICT OF VICTORIA—							
May 27..	Ground Bone. ...	39361	Sylvester Feed Co., Victoria, B.C.	5 lb.	10	Vendors.	C. Fagan...
" 27.	Salmon Guano....	39362	Brackman, Ker Milling Co.	5 lb.	12½	Fraser River Oil & Guano Co., Ltd., Vancouver.	" ..
" 27.	Whale Guano....	39363	"	5 lb.	12½	Pacific Whaling Co., Ltd., Vancouver.	" ..
" 28.	Bone and Blood...	39364	F. W. Savory.....	5 lb.	25	Frye, Bruhne & Co., Seattle, Wash.	" ..
" 28..	Fertilizer B. ...	39365	Victoria Chem. Co., Ltd.	5 lb.	10	Vendors, Victoria, B. C.	" ..



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Register Number.	Samples.	RESULTS OF ANALYSIS.							Remarks and Opinion of the Chief Analyst.		
		Nitrogen.		Phosphoric Acid.							
		Total, including that of Nitric Acid or Ammo- nia, if present.	Total, calculated as Am- monia.	Soluble in Water.	Reverted Soluble, or Citrate,	Insoluble.	Total.	Total Available.			
									</		

J. TALBOT, INSPECTOR.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
2279	Guarantee. . . . .	2.47	3.00				20.00				35917	
	Stand. Bull. 182. . .	3.00	3.64		18.80	6.50	25.30	18.80		11.00	32.83	
	As found . . . . .	1.73	2.10		13.30	16.71	30.01	13.30		7.76	25.52	Up to guarantee.
...	Guarantee. . . . .										35918	
	Stand. Bull. 182. . .											
	As found . . . . .	1.33	1.61		12.34	17.63	30.48	12.34		3.30	18.10	Not registered for 1909, or not identified.
2443	Guarantee. . . . .	4.96	5.95				16.70		3.03	1.09	35919	
	Stand. Bull. 182. . .	4.30	5.22	trace	11.90	4.68	16.58	11.90	3.42	7.60	32.53	
	As found . . . . .	4.16	5.05	"	9.33	6.20	15.53	9.33	6.36	7.59	32.63	Much above guarantee in potash.
2286	Guarantee. . . . .	4.12	5.00				9.00		5.00		35920	
	Stand. Bull. 182. . .	4.70	5.83	2.20	6.45	1.59	10.15	8.65	7.20	13.75	33.36	
	As found . . . . .	4.21	5.11	2.34	3.24	2.61	8.19	5.58	6.32	13.77	27.79	Up to guarantee.

J. F. POWER, INSPECTOR.

2391	Guarantee. . . . .	3.50	4.25				9.00		11.00		37676	
	Stand. Bull. 182. . .	3.07	3.72	8.64	1.89	0.58	11.11	10.53	11.35		34.37	
	As found . . . . .	3.64	4.42	8.50		0.20	8.70		11.90	6.10	34.54	Up to guarantee.
...	Guarantee. . . . .										37677	
	Stand. Bull. 182. . .											
	As found . . . . .	3.92	4.76		14.80	3.00	17.86			6.70	30.51	Not registered for 1909 or not identified.
....	Guarantee. . . . .										37678	
	Stand. Bull. 182. . .											
	As found . . . . .	7.56	9.16		7.90	0.20	8.10			7.60	34.45	Not registered for 1909.
....	Guarantee. . . . .										37679	
	Stand. Bull. 182. . .											
	As found . . . . .	8.12	9.86		12.20	1.90	14.10			8.00	41.60	Not registered for 1909.
2397	Guarantee. . . . .								50.00		50.00	37680
	Stand. Bull. 182. . .								49.22	2.80	49.22	
	As found . . . . .								54.10	3.20	54.10	Up to guarantee.

D. O'SULLIVAN, INSPECTOR.

....	Guarantee. . . . .										39361	
	Stand. Bull. 182. . .											
	As found . . . . .	3.36	4.08		14.60	3.00	17.60			10.10	28.38	Not registered for 1909.
...	Guarantee. . . . .										39362	
	Stand. Bull. 182. . .											
	As found . . . . .	7.84	9.52		7.20	trace	7.20			7.20	16.54	Not registered for 1909.
....	Guarantee. . . . .										39363	
	Stand. Bull. 182. . .											
	As found . . . . .	12.04	14.62							14.10	40.94	Not registered for 1909.
....	Guarantee. . . . .										39364	
	Stand. Bull. 182. . .											
	As found . . . . .	5.46	6.63		7.90	0.10	8.00			9.70	27.28	Not registered for 1909.
2391	Guarantee. . . . .	3.50	4.25				9.00		11.00		39365	
	Stand. Bull. 182. . .	3.07	3.72	8.64	1.89	0.58	11.11	10.53	11.35	13.25	34.37	
	As found . . . . .	3.08	3.74	11.40		0.20	11.60		11.50	8.90	35.71	Up to guarantee.







## APPENDIX H.

## BULLETIN No. 187—DISTILLED LIQUORS, QUEBEC.

OTTAWA, September 15, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to submit a report upon certain samples of distilled liquors, collected in the province of Quebec, during April and May of this year. This collection consists of 40 samples purchased as whisky, 40 samples purchased as gin, and 20 samples purchased as brandy, a total of 100 samples.

The inspection was made in consequence of a rumour to the effect that much spurious liquor was offered for sale in the province named. Instructions were given to procure samples at bar-rooms, and in such places as might be expected to furnish liquors of the lowest grades.

It is very satisfactory to note that none of the samples obtained give any evidence of being made, in whole or in part, from methylated spirit, or from wood alcohol; nor has the dissolved matter (See column headed 'Extract') been found to contain anything of an objectionable kind. Indeed, with the exception of 8 samples, the whiskies may be described as containing only negligible amounts of dissolved matters; and may be considered as merely diluted alcohol. The dilution is in many cases carried to an extreme. Only two (2) samples are within 25 per cent of proof strength; and if we acknowledged the legal validity of the limit for dilution of whisky which obtains in Great Britain, 95 per cent of these whiskies would have to be declared adulterated by addition of water. More than 30 per cent of the whisky samples fall short of containing half the alcohol strength known as proof. There can be no doubt that this constitutes a real fraud, and calls for legal redress. It will be noted that several vendors announced to our inspectors the fact of having added water to the whisky they sold.

The Sale of Foods and Drugs Amendment Act of 1879 (Great Britain) permits the sale of gin at a minimum strength of thirty-five degrees under proof. Twelve (12) samples, out of forty (40) examined fall below this standard of spirit strength. None of the samples of gin reach proof strength, although two samples approximate it.

The samples sold as brandy are with two exceptions up to the minimum spirit strength required by the British Standard.

The absence of any legal standards for spirits in Canada makes it impossible to pronounce upon the character of the samples now reported further than to say that they contain no methyl alcohol, and no substances that can be described as poisonous.

I beg to recommend the publication of this report as Bulletin No. 187.

I have the honour to be, sir.

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of the Manufac- turer or Furnisher, as given by the Vendor.	Inspector's Report. — (Is not an ex- pression of opinion )
				Quantity.	Price.		

DISTRICT OF QUEBEC—

1909.			\$ c.				
April 13....	Whisky ..	36843	Cléophas Turcotte, 844 Rue St. Valier.	1 qt....	0 80	T. B. E. Letellier, Quebec.	
" 13....	"	36844	Joseph Devarenne, Rue St. Valier.	1 " ....	0 70	Leclerc & Letellier, Quebec.	Whisky 'Wi-zer.'
" 13....	"	36845	Eusèbe Frechette, 1094½ Rue St. Valier.	1 " ....	0 70	Ronellac, Quebec.	
" 13....	"	36846	Louis Picard, 230 Rue Hermine.	1 " ....	0 70	T. Ledroit & Fils, Quebec.	
" 13....	"	36847	Pierre St. Michel, 34 Rue Durocher.	1 " ....	0 70	N. Rioux & Cie, Quebec.	Whisky 'Wi-zer.'
" 13....	"	36848	T. C. Bélanger, 623 Rue St. Valier.	1 " ....	0 70	Whitead & Turner, Quebec.	Whisky 'Par-ker.'
" 13....	"	36849	Gaudios Parent, 28 Rue Caron.	1 " ....	0 80	Joseph Falardeau, Quebec.	
" 13....	"	36850	George Richard, 29 Rue de la Couronne.	1 " ....	0 60	T. B. E. Letellier, Quebec.	Whisky 'Blanc.'
" 13. ..	"	36851	G. Germain, 455 Rue St. Valier.	1 " ....	0 70	" " "	Whisky 'Wi-zer.'
" 13....	"	36852	T. A. Martel, 32 Rue Dorchester.	1 " ....	0 70	Unknown	

DISTRICT OF ST. HYACINTHE—

April 19....	Whisky ..	1067	C. E. Birtz, Drummond-ville.	1 qt....	0 70	R. O. Brodeur, St. Hyacinthe.	Whisky 'Tel-lier.'
" 20....	"	1068	James McGuire, Farnham.	1 " ....	0 60	McManamy & Co., Sherbrooke.	Whisky 'Blanc.'
" 26....	"	1069	J. Lalarme, St. Hilaire Sta.	1 " ....	0 70	Lacaille, Gendron & Cie, Montreal.	
" 28....	"	1070	A. Petit, Roxton Falls.	1 " ....	0 70	Hudon & Orsali, Montreal.	Gooderham whisky.
" 29....	"	1071	Courtois & L'Allier, Arthabaskaville.	1 " ....	0 60	McManamy & Co., Sherbrooke.	
" 29....	"	1072	U. Mahen, Victoriaville.	1 " ....	0 65	H. H. Guay, Victoriaville.	Gooderham whisky.
May 5....	"	1073	J. H. McDonnell, Sherbrooke.	3 flasks.	1 15	McManamy & Co., Sherbrooke.	Whisky 'Tel-lier.'
" 5....	"	1074	W. Jamieson, Lennoxville	3 " ....	1 15	Unknown	
" 6....	"	1075	F. J. Southwood, Sherbrooke.	1 qt....	1 15	McManamy & Co., Sherbrooke.	Rye.
" 6....	"	1076	Hall & Nettleton, Rock Island.	1 qt....	1 00	" " "	



## SESSIONAL PAPER No. 14

## DISTILLED LIQUORS.

## RESULTS OF ANALYSIS.

Specific Gravity.	Alcohol, percentage.			Variation from 75° Spirit Strength.	Examination for Methyl Alcohol.				Extract grams per 100 c.c.	No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Weight.	Volume.	Proof Spirit.		Density.	Alcohol, p.c.	Refraction.				
							Found.	Theory.			

## E. BELAND, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.	p. c.		
0.9564	31.25	37.62	65.93	-19.07	0.9176	50.26	90.40	90.50	-0.1	0.014	36843	Below British standard strength.
0.9606	28.44	34.40	60.28	-14.72	0.9600	28.56	66.20	64.45	+1.75	0.011	36844	" " ..
0.9603	28.50	34.47	60.41	14.59	0.9462	36.44	77.70	77.50	+0.2	0.019	36845	" " ..
0.9607	23.85	29.04	50.89	-14.11	0.9624	26.93	63.40	63.55	-0.15	0.007	36846	" " ..
0.9669	23.77	28.95	50.73	-14.27	0.9672	23.46	57.20	57.20	0.0	0.007	36847	" " ..
0.9571	29.80	35.97	63.03	-11.97	0.9509	34.10	74.30	74.60	-0.3	0.009	36848	" " ..
0.9557	31.50	37.90	66.43	-8.57	0.9418	38.89	80.20	80.10	+0.1	0.010	36849	" " ..
0.9596	27.00	32.73	57.36	-17.64	0.9482	35.40	76.20	76.30	-0.1	0.010	36850	" " ..
0.9587	29.53	35.66	62.49	-12.51	0.9363	41.65	83.20	83.00	+0.2	0.012	36851	" " ..
0.9504	34.76	41.58	72.87	-2.13	0.9209	48.77	89.40	89.30	+0.1	0.009	36852	" " ..

## J. C. ROULEAU, INSPECTOR.

0.9661	24.80	30.16	52.86	-22.14	0.9564	30.78	70.30	70.10	+0.2	0.021	1067	Below British standard strength.
0.9535	33.22	39.86	69.84	-5.16	0.9472	35.90	77.00	76.90	+0.1	0.009	1068	" " ..
0.9652	25.09	30.51	53.46	-21.54	0.9569	30.50	69.70	69.70	0.0	0.010	1069	" " ..
0.9555	31.81	38.25	67.05	-7.95	0.9426	38.44	79.50	79.65	-0.15	0.018	1070	" " ..
0.9646	25.79	31.32	54.88	-20.12	0.9614	27.64	64.80	64.90	-0.1	0.009	1071	" " ..
0.9644	26.13	31.72	55.59	-19.41	0.9591	29.13	67.20	67.40	-0.2	0.049	1072	" " ..
0.9750	17.75	21.79	38.18	-36.82	0.9754	16.92	44.80	44.40	+0.4	0.012	1073	" " ..
0.9661	24.77	30.13	52.80	-22.20	0.9629	26.60	62.80	63.00	-0.2	0.007	1074	" " ..
0.9485	36.39	43.38	76.02	+1.02	0.9330	43.24	84.60	84.50	+0.1	0.247	1075	Up to standard strength in alcohol
0.9556	31.94	38.40	67.30	-7.70	0.9393	40.15	81.60	81.65	-0.05	0.086	1076	Below British standard strength.



Date of Collection.	Name of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufac- turer or Furnisher, as given by the Vendor.	Inspector's Report. — (Is not an ex- pression of Opinion).
				Quantity.	Price.		

DISTRICT OF MONTREAL—

1909.					\$	c.		
April 20....	Whisky ..	40031	Louis Lamoureux, 139 Commissioners Street, Montreal.	1 qt....	0	35	.....	.....
" 20....	" ..	40032	J. B. Petelli, 19 Place Youville, Montreal.	" ...	0	35	.....	.....
" 20....	" ..	40033	T. H. Lagannière, 11 Common St., Montr'l.	" ...	0	60	L. Chaput Fils & Co.	.....
" 21....	" ..	40034	Alph. Casgrain, 32 St. Maurice St., Montreal.	" ....	0	60	.....	.....
" 21....	" ..	40035	George Simard, 954 St. James St., Montreal.	" ....	0	55	.....	.....
" 21....	" ..	40036	D. Gauthier, 125 Commissioners St., Montreal.	" ...	0	50	.....	.....
" 27....	" ..	40037	Joseph Valiquette, 127 Commissioners Street, Montreal.	" ....	0	40	.....	.....
" 27....	" ..	40038	Schetagne & Theoret, 65 Commissioners St., Montreal.	" ....	0	40	.....	.....
" 27. .	" ..	40039	A. Robert, 93 St. Paul St., Montreal.	" ....	0	40	.....	.....
May 3...	" ..	40040	A. Roncais, 49 Craig St., Montreal.	" ....	0	45	.....	.....

DISTRICT OF OTTAWA—

Mar. 16 ...	Whisky ..	22971	O. Gauthier, Hull. ....	1 qt....	0	60	Unknown .....	Rye, added water
" 17....	" ..	22972	J. Fournier, Hull. ....	" ....	0	70	Ottawa Wine Vaults, Ottawa.	Proof, added water.
" 17....	" ..	22973	F. A. Gauthier, Hull...	" ....	0	70	Unknown .....	Proof, added water.
" 17....	" ..	22974	M. J. Laverdure, Hull.	" ....	0	70	" .....	Rye.....
" 17....	" ..	22975	Mrs. A. Delorme, Aylmer, P.Q.	" ...	0	70	Major Bros., Ottawa.	Proof. ...
" 19....	" ..	22976	G. L. Brulé, Buckingham.	" ....	0	85	G. Duval, Buckingham.	Rye .....
" 19....	" ..	22977	J. Blais, Buckingham. .	" ....	0	90	" .....	Proof.....
" 19....	" ..	22978	T. Senecal, Buckingham	" ....	0	75	Major Bros., Ottawa.	Rye ...
" 19 ...	" ..	22979	Wm. Campbell, Buckingham.	" ....	0	90	Unknown .....	Proof.....
" 19...	" ..	22980	D. Bourgon, Buckingham.	" ....	0	90	Tourangeau & Whisky Blanc. Champagne, Montreal.	



SESSIONAL PAPER No. 14  
DISTILLED LIQUORS.

RESULTS OF ANALYSIS.

Specific Gravity.	Alcohol, percentage.			Variation from 75° Spirit Strength.	Examination for Methyl Alcohol.				Extract grams per 100 c.c.	No. of Sample.	Remarks, and Opinion of the Chief Analyst.
Weight.	Volume.	Proof Spirit.	Density.		Alcohol, p.c.	Refraction.					
						Found.	Theory.	Difference.			

J. J. COSTIGAN, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.	p. c.		
0.9666	24.08	29.31	51.37	-23.63	0.9334	43.05	84.50	84.30	+0.20	0.012	40031	Below British standard strength.
0.9676	23.54	28.68	50.25	-24.75	0.9524	33.24	73.40	73.35	+0.05	0.010	40032	" " "
0.9687	22.85	27.86	48.82	-26.18	0.9614	27.64	64.80	64.90	-0.10	0.018	40033	" " "
0.9649	25.50	30.98	54.30	-20.70	0.9283	45.41	86.70	86.55	-0.15	0.012	40034	" " "
0.9377	29.93	36.12	63.30	-11.70	0.9435	37.94	79.20	79.05	+0.15	0.010	40035	" " "
0.9721	19.92	24.38	42.73	-32.27	0.9707	20.75	52.00	52.00	-0.00	0.015	40036	" " "
0.9703	21.46	26.22	45.95	-29.05	0.9529	32.94	72.80	73.00	-0.20	0.071	40037	" " "
0.9700	21.46	26.22	45.95	-29.05	0.9584	29.60	68.00	68.25	-0.25	0.015	40038	" " "
0.9633	26.33	31.96	56.00	-19.00	0.9367	41.45	83.20	82.80	+0.40	0.011	40039	" " "
0.9691	22.54	27.49	48.18	-26.82	0.9435	37.94	79.20	79.05	+0.15	0.016	40040	" " "

J. A. RICKEY, INSPECTOR.

0.9638	29.73	35.89	62.90	-12.10	0.9686	22.38	55.30	55.10	+0.20	0.182	22971	Below British standard strength.
0.9657	23.00	33.89	59.40	-15.60	0.9386	40.50	81.80	81.85	-0.05	0.631	22972	" " "
0.9560	32.75	39.32	68.92	-6.08	0.9365	41.55	83.00	82.90	+0.10	0.760	22973	" " "
0.9577	31.12	37.48	65.80	-9.20	0.9394	40.10	81.50	81.60	-0.10	0.338	22974	" " "
0.9636	27.93	33.81	59.26	-15.74	0.9407	39.45	80.60	80.80	-0.20	0.600	22975	" " "
0.9492	35.60	42.51	74.49	-0.51	0.9328	43.33	84.70	84.60	+0.10	0.286	22976	Up to standard strength in alcohol
0.9605	28.87	34.90	61.16	-13.84	0.9460	36.56	77.50	77.55	-0.05	0.017	22977	Below British standard strength.
0.9781	30.89	37.20	65.21	-9.79	0.9457	36.72	77.80	77.70	+0.10	0.176	22978	" " "
0.9668	23.92	29.13	51.05	-23.95	0.9577	30.06	69.00	69.05	-0.05	0.010	22979	" " "
0.9620	28.37	34.33	60.16	-14.84	0.9557	31.19	70.40	70.60	-0.20	0.008	22980	" " "



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of the Manufac- turer or Furnisher, as given by the Vendor.	Inspector's Report.  (Is not an ex- pression of opinion).
				Quantity.	Price.		

DISTRICT OF QUEBEC—

1909.					\$ c.		
April 14....	Gin .....	36853	L. J. B. Beaulieu, 305 Rue St. Joseph, Que- bec.	1 qt ..	0 80	L. T. B. Letellier, Quebec.	.....
" 14....	" .....	36854	A. Bergeron, 181 Rue Dorchester, Quebec...	1 " ....	0 90	T. B. E. Letellier, Quebec.	.....
" 14....	" .....	36855	L. Bertin, 128 Rue de la Couronne, Quebec...	1 " ....	0 80	U. Turcotte & Cie, Quebec.	.....
" 14....	" .....	36856	J. A. Godbout, 256 Rue du Roi, Quebec.	1 " ....	0 90	Myrand & Pouliot, Quebec.	.....
" 14....	" .....	36857	A. Larue, 84 Rue de la Couronne, Quebec.	1 " ....	0 70	T. Savard, Quebec.	.....
" 14....	" .....	36858	Jos. Trambly, 254 Rue St. Joseph, Quebec.	1 " ....	0 75	S. A. Clark, Mon- treal.	.....
" 14....	" .....	36859	M. Racine, 23 Rue Notre Dame des Anges, Quebec.	1 " ....	0 85	T. B. E. Letellier, Quebec.	.....
" 14....	" .....	36860	P. Allaire, 15 Rue Notre Dame des Anges, Quebec.	1 " ....	0 90	Langlois & Paradis, Quebec.	.....
" 14....	" .....	36861	N. Bedard, 62 Rue de la Couronne, Quebec.	1 " ....	0 80	A. Toussaint & Cie, Quebec.	.....
" 14....	" .....	36862	J. Genest, 266 Rue Des- foses, Quebec.	1 " ....	0 80	T. B. E. Letellier, Quebec.	.....

DISTRICT OF ST. HYACINTHE—

April 21....	Gin .....	1078	A. C. Poutre, St. Jean..	1 bot...	0 90	L. Moreau, St. De Kuyper's.... Jean.	.....
" 23....	" .....	1079	S. Page, Granby .....	1 qt....	1 00	Laporte, Martin & Co., Montreal.	" .....
" 23....	" .....	1080	A. Bousquet, Abbots- ford.	1 " ....	1 00	F. X. St. Charles & Cie, Montreal.	" .....
" 28....	" .....	1081	P. Cordeau, Upton.....	1 " ....	1 00	T. Berger, Upton	Melcher's. . . .
May 5....	" .....	1082	H. Venilleux, Sher- brooke.	1 bot...	1 10	Unknown.....	.....
" 5 ...	" .....	1083	A. E. Cooper, Sher brooke.	1 qt....	0 75	J. A. Gauthier & Cie, Sherbrooke.	De Kuyper's....
" 11....	" .....	1084	H. Bisson, St. Guill- anne.	1 " ....	1 00	Unknown.....	" .....
" 11	" .....	1085	W. Landry, Sorel .....	1 " ....	0 75	" .....	" .....
" 19....	" .....	1086	A. Beaudette, Sorel....	1 " ..	0 60	C. Labelle & Cie, Sorel.	Melcher's ... .
" 19....	" .....	1087	L. Petit, Sorel .....	1 " ....	0 85	" ..	De Kuyper.....



SESSIONAL PAPER No. 14

## DISTILLED LIQUORS.

RESULTS OF ANALYSIS.											Remarks, and Opinion of the Chief Analyst.	
Specific Gravity.	Alcohol, percentage.			Variation from 65 % Spirit Strength.	Examination for Methyl Alcohol.					Extract grams per 100 c.c.		No. of Sample.
	Weight.	Volume.	Proof Spirit.		Density.	Alcohol, p.c.	Refraction.					
							Found.	Theory.	Differ- ence.			

## E. BELAND, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.	p. c.	
0.9368	41.10	48.54	85.06	+20.06	0.9299	44.68	86.00	85.90	+0.10	0.025	36853
0.9446	37.28	44.36	77.75	+12.75	0.9354	42.10	83.50	83.40	+0.10	0.023	36854
0.9447	37.50	44.61	78.18	+13.18	0.9381	40.75	82.40	82.20	+0.20	0.014	36855
0.9392	39.50	46.80	82.02	+17.02	0.9244	47.18	88.20	87.95	+0.25	0.011	36856
0.9494	34.33	41.11	72.04	+ 7.96	0.9428	38.33	79.45	79.45	0.00	0.023	36857
0.9478	35.35	42.23	74.01	+ 9.01	0.9335	43.00	84.40	84.25	+0.15	0.017	36858
0.9472	35.30	42.17	73.91	+ 8.91	0.9341	42.71	84.10	84.00	+0.10	0.025	36859
0.9046	36.22	43.19	75.70	+10.70	0.9293	44.96	86.30	86.15	+0.15	0.025	36860
0.9415	38.11	45.28	79.36	+14.36	0.9310	44.18	85.50	85.45	+0.05	0.018	36861
0.9425	37.56	44.67	78.28	+13.28	0.9287	45.25	86.50	86.40	+0.10	0.036	36862

## J. C. ROULEAU, INSPECTOR.

0.9421	38.44	45.65	80.00	+15.00	0.9281	47.77	88.60	88.45	+0.15	0.007	1078
0.9219	48.82	56.63	99.24	+34.24	0.9015	57.42	95.10	94.90	+0.20	0.010	1079
0.9419	38.50	45.71	80.11	+15.11	0.9316	43.90	85.20	85.15	+0.05	0.011	1080
0.9320	43.90	51.53	90.30	+25.30	0.9295	44.86	86.20	86.10	+0.10	0.059	1081
0.9475	35.55	42.45	74.39	+ 9.39	0.9429	38.28	79.60	79.45	+0.15	0.033	1082
0.9242	25.86	31.40	55.03	— 9.97	0.9352	32.75	72.80	72.75	+0.05	0.269	1083
0.9223	48.14	55.93	98.01	+33.01	0.9089	54.05	93.20	93.00	+0.20	0.033	1084
0.9478	35.65	42.56	74.59	+ 9.59	0.9406	39.50	80.90	80.80	+0.10	0.042	1085
0.9605	28.44	34.40	60.28	— 4.72	0.9531	32.81	72.70	72.80	—0.10	0.015	1086
0.9217	45.91	53.62	93.98	+28.98	0.9151	51.33	91.50	91.25	+0.25	0.024	1087



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of the Manufac- turer or Furnisher, as given by the Vendor.	Inspector's Report.  (Is not an ex- pression of opinion.)
				Quantity.	Price.		

DISTRICT OF MONTREAL—

1909.					\$	c.		
April 20....	Gin ....	40041	Louis Lamoureux, 129 Commissioners St., Montreal.	1 qt ...	0	35	.....	.....
" 20....	" .....	40042	J. B. Petelli, 19 Rue Youville, Montreal.	1 " ....	0	60	F. X. St. Charles.	.....
" 20....	" .....	40043	J. H. Lagannière, 11 Common St., Montreal	1 " ....	0	70	.....	.....
" 21....	" .....	40044	Alph. Casgrain, 32 St. Maurice St., Montreal.	1 " ....	0	60	.....	.....
" 21....	" .....	40045	Geo. Simard, 954 St. James St., Montreal.	1 " ...	0	65	.....	.....
" 21....	" .....	40046	D. Gauthier, 125 Commissioners St., Montreal.	1 " ....	0	75	.....	.....
" 27....	" .....	40047	Joseph Valiquette, 127 Commissioners St., Montreal.	1 " ....	0	70	.....	.....
May 3....	" .....	40048	P. Vandelac & Co., 33 Jacques Cartier St., Montreal.	1 " ....	0	70	.....	.....
" 3... ..	" .....	40049	L. Bachaud, 209 St. Paul St., Montreal.	1 " ...	0	50	.....	.....
" 3....	" .....	40050	A. Langlois, 82 Berri St., Montreal.	1 " ....	0	70	.....	.....

DISTRICT OF OTTAWA—

Mar. 16	Gin ....	22981	A. C. Latour, Hull.....	1 qt....	0	90	Ottawa Wine Vaults, Ottawa.	Red Cross; added water.
" 16....	" ...	22982	D. Charron, Hull.....	1 " ....	0	55	Melchers, Berthier-ville.	" " ..
" 22	" .....	22983	T. A. James, Shawville.	1 " ....	1	00	Chaput Fils & Cie, Montreal.	.....
" 22. .	" .	22984	C. Caldwell, Shawville.	1 " ....	1	00	Unknown .....	.....
" 26...	" ...	22985	N. Tellier, Hull.....	1 " ....	0	90	Melchers, Berthier-ville.	Red Cross.....
" 26....	" ..	22986	S. Desmarais, Hull.....	1 " ....	0	80	Unknown .....	.....
" 26	" ...	22987	D. Gravelle, Hull....	1 " ....	0	85	S. J. Major, Ltd., Ottawa.	.....
" 26	" .....	22988	Chas. O'Connor, Hull...	1 " ...	0	75	" " .....	.....
" 27...	" .....	22989	J. F. Kennedy, Quyon.	1 " ....	0	90	Chaput Fils & Co., Montreal.	.....
" 27....	" .	22990	James McCann, Quyon.	1 " ....	1	00	S. J. Major, Ltd., Ottawa.	Red Cross ..



SESSIONAL PAPER No. 14  
DISTILLED LIQUORS.

RESULTS OF ANALYSIS.

Specific Gravity.	Alcohol, percentage.			Variation from 65 °C Spirit Strength.	Examination for Methyl Alcohol.					Extract grams per 100 c.c.	No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Weight.	Volume.	Proof Spirit.		Density.	Alcohol, p.c.	Refraction.					
							Found.	Theory.	Difference.			

J. J. COSTIGAN, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.	p. c.	
0.9499	34.52	41.32	72.41	+ 7.41	0.9492	34.90	75.90	75.75	+0.15	0.088	40041
0.9606	28.19	34.11	59.78	— 5.22	0.9535	32.56	72.60	72.50	+0.10	0.011	40042
0.9601	28.06	33.97	59.53	— 5.47	0.9535	32.56	72.50	72.50	none.	0.011	40043
0.9553	31.75	38.18	66.93	+ 1.93	0.9481	35.45	76.40	76.40	0.00	0.019	40044
0.9598	28.62	34.61	60.66	— 4.34	0.9507	34.19	74.70	74.75	—0.05	0.010	40045
0.9700	21.23	25.95	54.47	—10.53	0.9697	21.54	55.30	55.30	0.00	0.026	40046
0.9541	28.87	24.90	61.16	— 3.84	0.9547	31.81	71.30	71.40	—0.10	0.080	40047
0.9608	27.71	33.56	58.82	— 6.18	0.9608	28.06	65.50	65.60	—0.10	0.014	40048
0.9613	27.57	33.39	58.53	— 6.47	0.9446	37.33	78.60	78.40	+0.20	0.015	40049
0.9468	36.22	43.19	75.70	+10.70	0.9289	45.14	86.30	86.30	0.00	0.034	40050

J. A. RICKEY, INSPECTOR.

0.9442	37.94	45.10	79.04	+14.04	0.9366	41.50	83.00	82.85	+0.15	0.259	22981
0.9286	44.86	52.53	92.06	+27.06	0.9015	57.42	95.10	94.90	+0.20	0.010	22982
0.9576	29.53	35.66	62.49	— 2.51	0.9494	34.81	75.40	75.60	—0.20	0.047	22983
0.9329	43.71	51.32	89.95	+24.95	0.9290	45.09	86.40	86.25	+0.15	0.053	22984
0.9327	43.43	51.02	89.41	+24.41	0.9335	43.00	84.50	84.25	+0.25	0.036	22985
0.9599	29.33	35.43	62.09	— 2.91	0.9509	34.10	74.70	74.60	+0.10	0.469	22986
0.9547	31.75	38.18	66.93	+ 1.93	0.9572	30.33	69.50	69.40	+0.10	0.129	22987
0.9598	29.33	35.43	62.09	— 2.91	0.9546	31.87	71.40	71.50	—0.10	0.347	22988
0.9487	35.40	42.29	74.10	+ 9.10	0.9565	30.72	69.80	70.00	—0.20	0.260	22989
0.9341	42.14	49.66	87.02	+22.02	0.9279	45.59	86.90	86.70	+0.2	0.021	22990



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of the Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity.	Price.		
DISTRICT OF QUEBEC—							
1909.					\$ c.		
April 15....	Brandy...	36863	Alphonse Mathieu, 156 Rue de Pont, Quebec.	1 qt....	1 20	F. Savard, Quebec.	.....
" 15....	" ..	36864	Louis Robitail, 154 Rue de Pont, Quebec.	1 " ....	1 20	Unknown .....	.....
" 15....	" ..	36865	François Rathé, 188 Rue de Pont, Quebec.	1 " ....	1 20	T. Ledroit & Fils, Quebec.	.....
" 15....	" ..	36866	Edouard Poulin, 97 Rue St. Joseph, Quebec.	1 " ....	1 20	A. Toussaint & Cie, Quebec.	.....
" 15....	" ..	36867	Charle Vezina, 46 Desfoses, Quebec.	1 " ....	1 20	Unknown ..	.....
DISTRICT OF ST. HYACINTHE—							
April 20 ...	Brandy...	1089	G. A. Rivard, Farnham	1 qt....	1 50	Boivin, Wilson & Co., Montreal.	.....
" 21....	" ..	1090	H. Cartier, St. John....	1 " ....	1 00	Unknown .....	.....
" 28....	" ..	1091	W. Langlois, Actonvale.	1 " ....	1 25	A. E. Mallette & Co., Montreal.	Hennessey .....
May 5....	" ..	1092	W. DesRuisseau, E. Sherbrooke.	1 " ....	1 15	Unknown .....	Pellisson .....
" 10....	" ..	1093	D. Dupuis, St. Joseph de St. Hyacinthe.	1 " ....	1 25	Fournier & Fournier, St. Hy'ete.	.....
DISTRICT OF MONTREAL—							
April 27 ...	Brandy...	40051	Schetagne & Theoret, 65 Commissioners Street, Montreal.	1 qt....	0 95	.....	.....
" 27... ..	" ..	40052	A. Robert, 93 St. Paul St., Montreal.	1 " ....	0 75	.....	.....
May 3....	" ..	40053	P. Vandelaë & Co., 33 Jacques Square, Montreal.	1 " ....	1 00	.....	.....
" 3....	" ..	40054	L. Bachaud, 207 St. Paul St., Montreal.	1 " ....	1 20	.....	.....
" 3....	" ..	40055	H. Courtois, 2 Berrie St., Montreal.	1 " ....	1 15	.....	.....
DISTRICT OF OTTA WA—							
Mar. 17....	Brandy...	22991	E. Bell, Aylmer, P.Q....	1 qt....	1 40	H. N. Bate & Son, Ottawa.	.....
" 17....	" ..	22992	N. Noël, Aylmer, P.Q....	1 " ..	1 40	S. J. Major, Ltd., Ottawa.	.....
" 19....	" ..	22993	A. Maisonneuve, Buckingham.	1 " ...	1 25	Ottawa Wine Vaults Ottawa.	.....
" 26....	" ..	22994	L. St. Pierre, Hull.....	1 " ...	1 40	L. H. Major, Ottawa.	.....
" 27 ...	" ..	22995	M. Doyle, Quyon .....	1 " ....	1 50	Ottawa Wine Vaults, Ottawa.	.....



SESSIONAL PAPER No. 14  
DISTILLED LIQUORS.

## RESULTS OF ANALYSIS.

Specific Gravity.	Alcohol, percentage.			Variation from 75 Spirit Strength.	Examination for Methyl Alcohol.					Extract grains per 100 c.c.	No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Weight.	Volume.	Proof Spirit.		Density.	Alcohol, p.c.	Refraction.					
							Found.	Theory.	Difference.			
E. BELAND, INSPECTOR.												
	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.	p. c.		
0.9360	43.29	50.87	89.15	+14.15	0.8972	59.30	96.00	95.85	+0.15	0.730	36863	
0.9459	38.06	45.22	79.25	+ 4.25	0.9100	53.57	92.90	92.70	+0.20	0.597	36864	
0.9534	33.94	40.67	71.27	— 3.73	0.9458	36.67	77.80	77.70	+0.10	0.430	36865	
0.9534	39.75	47.08	82.50	+ 7.50	0.9194	49.44	90.00	89.85	+0.15	0.565	36866	
0.9352	43.76	51.38	90.03	+15.03	0.9044	56.14	94.20	94.20	0.00	0.718	36867	
J. C. ROULEAU, INSPECTOR.												
0.9507	41.10	48.54	85.06	+15.06	0.9359	41.85	83.20	83.20	0.00	0.565	1089	
0.9378	44.36	52.01	91.14	+16.14	0.9282	45.46	86.80	86.60	+0.20	1.656	1090	
0.9195	50.39	58.23	102.05	+27.05	0.9157	51.08	91.20	91.10	+0.10	0.344	1091	
0.9524	35.20	42.06	73.72	— 1.28	0.9365	41.55	82.80	82.90	—0.10	0.626	1092	
0.9431	38.89	46.14	80.86	+ 5.86	0.9260	46.46	87.60	87.60	0.00	0.223	1093	
J. J. COSTIGAN, INSPECTOR.												
0.9524	34.67	41.48	72.68	+ 2.32	0.9305	44.41	85.70	85.65	+0.05	0.679	40051	
0.9504	37.39	44.49	77.96	+ 2.96	0.9262	46.36	87.40	89.30	+0.10	0.635	40052	
0.9449	38.39	45.59	79.89	+ 4.89	0.9287	45.23	86.50	86.40	+0.10	0.560	40053	
0.9245	48.96	56.77	99.49	+24.49	0.9130	52.23	91.80	91.75	+0.05	0.923	40054	
0.9274	47.23	54.99	96.37	+21.37	0.9000	58.05	95.20	95.20	0.00	0.491	40055	
J. A. RICKEY, INSPECTOR.												
0.9296	45.09	52.77	92.48	+17.48	0.9181	50.04	90.50	90.30	+0.20	0.259	22991	
0.9438	39.65	46.97	82.31	+ 7.31	0.9316	43.90	85.20	85.15	+0.05	0.666	22992	
0.9339	43.43	51.02	89.41	+14.41	0.9119	53.09	92.50	92.30	+0.20	0.274	22993	
0.9290	46.86	54.62	95.71	+20.71	0.9162	50.87	91.20	91.00	+0.20	1.155	22994	
0.9440	38.89	46.14	80.86	+ 5.86	0.9270	46.00	87.20	87.00	+0.20	0.397	22995	



## APPENDIX I.

## BULLETIN No. 188—LIQUOR PICIS CARBONIS (SOLUTION OF COAL TAR.)

OTTAWA, September 20, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to submit herewith a report upon the examination of twenty-four (24) samples purchased by our inspectors as Liquor Picis Carbonis (Solution of Coal Tar).

The British Pharmacopœia directs this article to be prepared as follows—‘Digest for two days at 120° F., one part by weight of prepared coal tar, in five of a Tincture of Quillaia (1 in 10, alcohol 90 per cent.) Decant, or filter when cold.’

The finished Liquor Picis Carbonis should therefore contain about 75 per cent of its weight of 90 per cent alcohol; or approximately 67·5 per cent of its weight of absolute alcohol. Allowing for evaporation and loss, it may be reasonable to accept 60 per cent by weight, or 67 per cent by volume, in the article as dispensed. In all samples containing alcohol, the content of alcohol meets quantitative requirements.

An alcoholic solution of coal tar, known as *Liquor Carbonis Detergens*, is much employed in the treatment of skin diseases. This is not official, and is not to be confounded with *Liquor Picis Carbonis*, as above described.

Various solutions of coal tar, some of them being proprietary articles, are found on the market. Five samples of this character have been accepted by our inspectors. In accepting these articles, unless expressly supplied as Liquor Picis Carbonis, our Inspectors are at fault.

This is clearly the case in Nos. 987 and 988, which are distinctly labelled ‘*Goudron de Norvège*’, and are proprietary. They contain no alcohol. Nos. 41170 and 41171 (Kingston) and 41345 (Toronto) are likewise non-alcoholic solutions of tar. If they were offered as *Liquor Picis Carbonis*, the vendor is guilty of substitution. It would appear from the remarks of the inspector that No. 41345 was actually so supplied, but in good faith. See App. D. Liquor Picis Carbonis is the only solution of coal tar officially authorized by the British Pharmacopœia. Several other solutions of Coal Tar are more or less widely known and used. As long as these comply with the requirements of the Patent or Proprietary Medicines Act, they are properly enough dispensed, when asked for. But they must not be supplied when Liquor Picis Carbonis, or Official Solution of Coal Tar is demanded.

Of the remaining 19 samples, 13 correspond to the pharmacopœial requirements, and are genuine. Six samples are adulterated, in the sense that they are made with wood alcohol, or with methylated spirit, instead of with ethyl alcohol as required by the Pharmacopœia. The Inland Revenue Act (R. S. C. 34) enacts as follows (S. 26):—‘Every person who uses spirits containing methyl alcohol in any form, in any pharmaceutical or medicinal preparation intended for internal use, shall be liable to a penalty of five hundred dollars.’

The Inland Revenue Amendment Act, of 1908, further enacts (Sec. 7):—‘Every person who uses methyl alcohol, or spirits containing methyl alcohol in any pharmaceutical, medicinal or other preparation intended for external use shall affix to the vessel containing the said preparation a label stating, in black letters not less than one-



## SESSIONAL PAPER No. 14

fourth of an inch in height, the presence of methyl alcohol therein; and any person violating the provisions of this subsection shall incur a penalty not less than fifty dollars and not exceeding two hundred dollars.' Although five samples are found to be technically adulterated, I am convinced that in no case has there been any intent to commit fraud. Failure to meet the requirements of the Act apparently results from non-acquaintance with these requirements. The Inland Revenue Amendment Act was assented to April 10, 1908, up to which date the employment of wood alcohol in preparations for external use, without declaration, was not illegal. My justification in advising that no legal action be taken in the present case (the first official inspection of Liquor Picis Carbonis) must be found in the above remarks, and in excerpts from correspondence which appear as appendices to this report.

I beg to recommend the publication of this report as Bulletin No. 188.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



1 GEORGE V., A. 1911

BULLETIN No. 188—LIQUOR PICIS

Date of Collec- tion.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of the Manutac- turer or Furnisher, as given by the Vendor.	Inspector's Report.  (Is not an ex- pression of opinion.)
				Quantity.	Cents.		
DISTRICT OF NOVA SCOTIA—							
1911.							
Aug. 17	Liq. Picis Car- bonis (solution of coal tar).	41736	National Drug Co., Hali- fax, N.S.	6 oz..	75	Nat. Drug and Liq. Picis Carb. Chem.Co., Mont- B.P. real.	
17	"	41737	Brown Bros. & Co., Halifax, N.S.	6 " ..	75	" " .. " " ..	
DISTRICT OF PRINCE EDWARD ISLAND—							
July 28..	Liq. Picis Car- bonis (solution of coal tar).	38571	P. N. Enman, Summer- side.	6 oz..	90	W. V. Wright, .. Southwark, Lon- don.	
" 29..	"	38572	C. D. Rankin, Charlotte- town.	6 " ..	90	" " ..	
DISTRICT OF NEW BRUNSWICK—							
July 20..	Liq. Picis Car- bonis (solution of coal tar).	39536	The Nat. Drug Co., Ltd., St. John, N.B.	6 oz..	60	Vendors.....	
" 26..	"	39537	A. Chipman Smith & Co.	6 " ..	90	W. V. Wright & Wright's Co., Southwark, Carbonis London.	Liq.
DISTRICT OF ST. HYACINTHE—							
Aug. 3..	Liq. Picis Car- bonis (solution of coal tar).	987	Griffith's Pharmacy, Sherbrooke.	1 bot.	25	Dr. J. G. Lavoie, lette, Montreal.	Goudron de Norvège (Li- quet r concen- trée.)
10..	"	988	St. Jacques Pharmacy, St. Hyacinthe.	1 " ..	75	Guyot à Paris, France.	Goudron Guyot. (Solution not guaranteed).
DISTRICT OF MONTREAL—							
July 20.	Liq. Picis Car- bonis (solution of coal tar).	40283	B. Fox, 168 St. Law- rence B., Montreal.	6 oz..	60	Nat. Drug and Chem.Co., Mont- real.	
" 20..	"	40284	John J. Weinfeld, 197 Bleury St., Montreal.	6 " ..	60	Unknown. ....	



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CARBONIS (SOLUTION OF COAL TAR).

RESULTS OF ANALYSIS.									
Density of Sample.	Approximate Alcohol, p. c.		Examination for Methyl Alcohol.						
	Weight.	Volume.	Density.	Alcohol by Weight.	Refraction.			Methyl Alcohol.	
					Found.	Theory	Difference.		
No. of Sample.	Remarks, and Opinion of the Chief Analyst.								

R. J. WAUGH, INSPECTOR.

	p.c.	p.c.		p.c.				p.c. of total Alcohol.		
0·8656	72·70	79·27	0·9452	37·00	78·3	78·00	+0·3	none.	41736	Genuine.
0·8656	72·70	79·27	0·9576	30·11	69·0	69·14	—0·14	none	41737	"

THEO. MOORE, INSPECTOR.

0·8814	66·09	73·38	0·9406	39·50	80·8	80·8	0·0	none	38571	Genuine.
0·8864	63·96	71·42	0·9721	19·58	49·5	49·7	—0·2	none	38572	"

J. C. FERGUSON, INSPECTOR.

0·8464	80·79	86·15	0·9394	40·10	75·5	81·6	—6·1	14·0	39536	Adulterated. See Appendix A.
0·8829	65·46	72·80	0·9270	46·00	86·7	87·0	—0·3	none	39537	Genuine.

J. C. ROULEAU, INSPECTOR.

1·0110	none	none	.....	.....	.....	.....	.....	.....	987	Proprietary.
1·0199	none	none	.....	.....	.....	.....	.....	.....	988	"

J. J. COSTIGAN, INSPECTOR.

0·8634	73·63	80·08	0·9701	16·38	43·2	42·9	+0·3	none	40283	Genuine.
0·8619	74·27	80·64	0·9775	15·25	41·0	41·0	0·0	none	40284	"



1 GEORGE V., A. 1911

BULLETIN No. 188—LIQUOR PICIS

Date of Examination.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of the Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report.  (Is not an ex- pression of opinion.)
				Quantity.	Cents.		
DISTRICT OF OTTAWA—							
1909.							
Sept. 1	Liq. Picis Carbonis (solution of coal tar).	41279	Nat. Drug and Chem. Co., Ltd., Ottawa.	8 oz.	70	Vendors.....	Labelled 'Liq. Picis Carbonis B.P.'
" 1.	" "	41280	Lymans, Ltd., Ottawa.	8 "	68	Lymans, Ltd., Montreal.	" " "
DISTRICT OF KINGSTON—							
Aug. 5.	Solution of coal tar.	41170	Nat. Drug Co., Kingston.	6 oz.	8		
" 6.	" "	41171	R. Templeton Belleville.	6 "	8	A. Ramsay & Son, Montreal.	
DISTRICT OF TORONTO—							
Aug. 13.	Liq. Picis Carbonis (solution of coal tar).	41344	A. E. Legge, Toronto.	6 oz.	35	The E. B. Shuttleworth Chem. Co., Ltd., Toronto.	Liq. Carbonis Detergens. Sold as Liq. Picis Carbonis.
" 13.	" "	41345	Hargreaves Bros., Queen St. West, Toronto.	6 "	25	Lyman, Knox & Clarkson, Toronto.	Sold as Liq. Picis Carbonis.
DISTRICT OF LONDON—							
July 23.	Liq. Picis Carbonis (solution of coal tar).	30695	C. E. Nasmith & Co., Stratford.	3 bot.	60	E. B. Shuttleworth & Co., Toronto.	
" 29.	Liq. Carbonis detergens.	30809	J. E. Hovey, Clinton.	3 oz.	25	J. Winer & Co., Hamilton.	Liq. Carbonis Detergens.
DISTRICT OF WINDSOR—							
July 28.	Liq. Picis Carbonis (solution of coal tar).	35998	Anderson & Nelles, London.	6 oz.	60	Nat. Drug Co., Montreal.	
" 28.	Solut. of coal tar	35999	W. T. Strong, London.	6 "	60	Vendor .....	



SESSIONAL PAPER No. 14  
CARBONIS (SOLUTION OF COAL TAR).

RESULTS OF ANALYSIS.										No. of Sample.	Remarks, and Opinion of the Chief Analyst.
Density of Sample.	Approximate Alcohol, p.c.		Examination for Methyl Alcohol.								
	Weight.	Volume.	Density.	Alcohol by Weight.	Refraction.			Methyl Alcohol.			
					Found.	Theory.	Difference.				

J. A. RICKY, INSPECTOR

	p.c.	p.c.	p.c.					p.c. of total Alcohol.		
0.8632	73.71	80.15	0.9342	42.67	84.3	83.9	+0.4	none	41279	Genuine.
0.8472	80.46	85.87	0.9118	52.77	92.4	92.1	-0.3	none	41280	"

JAS. HOGAN, INSPECTOR.

1.1930	none	none							41170	Is not Liquor Picis Carbonis. See App. B.
1.1654	none	none							41171	" " " Sold as solution of coal tar.

H. J. DAGER, INSPECTOR.

0.8953	60.13	67.81	0.9419	38.83	43.5	81.00	-36.5	86.1	41344	Is not Liq. Picis Carbonis. The fact of being made with methyl alcohol should be stated on the label. See App. C.
1.0211	none	none							41345	Is not Liquor Picis Carbonis. See App. D.

T. KIDD, INSPECTOR.

0.8545	77.50	83.43	0.9242	47.27	42.8	88.0	-45.2	93.4	30695	Adulterated. Contains methyl alcohol. See App. E.
0.8632	73.71	80.15	0.9486	35.20	39.6	76.1	-36.5	90.6	30809	Is adulterated and not Liq. Picis Carbonis. The fact of being made with methyl alcohol should be stated on the label. See App. F.

JNO. TALBOT, INSPECTOR.

0.8707	70.56	77.39	0.9168	50.61	91.0	90.8	+0.2	none	35998	Genuine.
0.8379	84.12	88.79	0.9234	47.64	46.05	88.35	-42.3	86.7	35999	Adulterated. Contains methyl alcohol. See App. G.



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BULLETIN No. 188—LIQUOR PICIS

Date of Collec- tion.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of the Manufac- turer or Furnisher, as given by the Vendor.	Inspector's Report.  (Is not an ex- pression of opinion.)
				Quantity.	Cents.		

DISTRICT OF CALGARY—

1909;							
Aug. 11..	Liq. Picis Car- bonis (solution of coal tar).	35598	A. Archibald, Edmon- ton.	6 oz..	50	Wright & Co., Southwark, Lon- don, Eng.	.....
" 11..	" "	35599	D. W. Macdonald, Ed- monton.	6 " ..	50	Unknown .....	.....

DISTRICT OF VANCOUVER—

July —..	Liq. Picis Car- bonis (solution of coal tar).	37716	Wilson's Drug Store, Vancouver.	6 oz..	60	Vendor .....	...
" —..	"	37717	Leslie G. Henderson, Vancouver.	6 oz..	1 50	W. V. Wright & Co., Southwark, London.	.....



SESSIONAL PAPER No. 14

CARBONIS (SOLUTION OF COAL TAR).

RESULTS OF ANALYSIS.									
Density of Sample.	Approximate Alcohol, p.c.		Examination for Methyl Alcohol.						
	Weight	Volume.	Density.	Alcohol by Weight.	Refraction.			Methyl Alcohol.	
					Found.	Theory	Differ- ence.		
									Remarks, and Opinion of the Chief Analyst.

R. W. FLETCHER, INSPECTOR.

	p.c.	p.c.		p.c.				p.c. of total Alcohol	
0 8876	63.43	70.93	0.9709	20.58	51.5	54.6	-0.1	none	35598 Genuine.
0 8567	76.58	82.65	0.9298	44.73	53.7	86.0	32.3	69.3	35599 Adulterated. Contains methyl alcohol.

J. F. POWER, INSPECTOR.

0 8558	76.96	82.97	0.9768	15.83	42.6	42.2	+0.4	none	37716 Genuine.
8853	64.43	71.86	0.9452	37.00	77.90	78.0	-0.1	none	37717 "



## APPENDICES.

A.—Referring to sample 39536:—This sample was carefully checked, and the presence of methyl alcohol established. It would appear that the manufacturers were not aware that wood alcohol had been used in its preparation, and the small amount of methyl alcohol present may have been added through some oversight in manufacture. The vendors write, under date 4th October—‘Our laboratory man still claims that he uses nothing but pure alcohol in the manufacture of Liq. Carbonis Detergens; but at the same time I have no doubt that your analysis is correct, and I will have what we have on hand, destroyed, and will see that our new lot contains nothing but pure grain alcohol.’

B.—In regard to sample 41170, the following letter of September 22, has been received from the vendors. ‘Your advance notice *re* Liquor Picis Carbonis is duly to hand, and your observation noted. We have to thank you for the information. It is information to us. On inquiry we find that this preparation was taken over by this Company from their predecessors, Henry Skinner & Co. On further inquiry we are informed that this was made by Henry Skinner & Co., probably 15 years ago, before the preparation became official. What little we had in stock (less than a gallon) has been destroyed’.

C.—Sample 41344 was apparently tendered as Liquor Carbonis Detergens, and invoiced as Liquor Picis Carbonis, by our Inspector in a mistake. The vendor writes under date September 21:—‘Your collector received sample from me as Liquor Carbonis Detergens, one of the not official preparations by E. B. Shuttleworth. This preparation is made from an old formula used before the British Pharmacopoeia of 1898 made Liquor Picis Carbonis official. My assistant showed him original bottle, labelled Liquor Carbonis Detergens, and also showed him Squire’s Companion to the B. P. which stated that it was not official. We understood he was taking it, as labelled, for he appeared to copy the label. He asked for Liquor Picis Carbonis, and we showed him that the preparation we had was not the official one’.

Our inspector’s account of the transaction is as follows:—‘The clerk serving me asked if Detergens was what I wanted. I said Liquor Picis Carbonis was what I wanted. He asked proprietor about it. Proprietor said it was all right, and the clerk then filled the bottle’. While it is true that Liquor Carbonis Detergens fills many of the requirements of Liquor Picis Carbonis, the preparations are not identical, and should not be dispensed as being so.

Regarding the presence of methyl alcohol in this preparation, the E. B. Shuttleworth Co. writes under date September 25:—‘We are in receipt of your favour of the 24th instant, with inclosure of Inland Revenue Act, for which accept our thanks. This is the first intimation we have had, that preparations containing Methyl. Alcohol should be labelled as such, and we will immediately comply with that condition, although it will not affect us materially as we believe we have only one or two preparations in which we use it; this particular preparation (Liq. Carbonis Detergens) is used almost exclusively as a disinfectant’.

D.—In the matter of sample 41345, the vendors write, under date September 20:—‘We should explain in fairness to the manufacturer whose name is attached to the container, that the title on the container is Liquor Carbonis Detergens. Our custom has been to treat ‘Liquor Carbonis Detergens’ and ‘Liquor Picis Carbonis’ as identically one and the same. From any information at hand, we have felt justified in this conclusion and in regard to the non-alcoholic adulteration, authorities state both contain alcohol’. Also under date September 25:—‘Replying to yours dated 23rd instant, we presume we must accept responsibility for the article sold to Inspector Dager. We would however point out in justification of our custom, that in 1888 some



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years previous to the adoption by B. P. revision committee of any formula for Liquor Picis Carbonis, we prepared a Liquor Carbonis Detergens as per inclosed formula, and as it is practically identical with the B. P. article and as the official formula was evidently intended for uses that had been given the Liquor Carbonis Detergens, we continued to prepare it by our method. Unfortunately however as the quantity used became very much reduced, we purchased the article instead of preparing it ourselves. We must accept responsibility, but contend that we acted conscientiously and in good faith."

E.—Regarding sample 30695, Mr. H. M. Myers of Stratford, makes a declaration, of date September 28, to the effect that the sample supplied by him as Liquor Picis Carbonis, was made by the E. B. Shuttleworth Co., of Toronto.

F.—In regard to sample 30809, Mr. Hovey writes as follows, under date September 20 :—"Received, your report to-day stating the sample of Liq. Picis Carbonis obtained from me on July 29, contains wood alcohol. I find on looking over my old invoices that I procured a one pound bottle from Messrs J. Winer & Co., Hamilton, on July 8, 1908. It was from that bottle that I gave the sample to Mr. Kidd. The bottle I still have in stock. It is labelled "Liq Carbon. Detergens" J. W. & Co. label. There is also another label on bottom of bottle showing J. W. & Co., to be a branch of the National Drug & Chemical Company'.

G.—Regarding 35999, the vendor writes:—"Was made by us with Columbia Spirits No. 1, and to tell the truth we can see no reasonable objection to this, as Liq. Picis Carbonis is never used undiluted, but always in weak watery solutions. If this is harmful, how is it the hospitals use Columbia Spirits No. 1 for bathing purposes? We will be pleased to conform strictly to the B. P. process in future'.







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## APPENDIX J.

## BULLETIN No. 189—CREAM.

OTTAWA, September 23, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report of work done upon 65 samples of so called cream purchased by our inspectors in 13 out of the 15 inspectoral districts of Canada.

This is the first time that a systematic collection of cream has been made, under the Adulteration Act. A collection of 367 milk samples, made in April, 1906, (Bulletin 121) includes 29 samples of cream, whose fat content ranged from 12.63 to 33.51 per cent with an average of 22.76 per cent.

In view of the desirability of fixing standards for milk and allied food substances, under Sec. 26 of the Adulteration Act, it is important to discover what the public expects to get, when it buys cream. The work now reported shows that the public is offered, and accepts as cream an article varying in butter fat (the characteristic and the valuable component of cream) from above 42 to 11.10 per cent. Whether or not the public is satisfied with this condition of things is another matter.

In order that the great variations of value in market cream may be clearly apprehended, I here arrange the 64 samples analysed of the present collection, in serial order of butter fat content.

No. 36784. ....	42.66 above 40 %	No. 35971. ....	23.72 above 20%
41513. ....	41.27 "	41158. ....	23.61 "
35972. ....	40.12 "	41724. ....	23.38 "
		35583. ....	22.92 "
No. 41157. ....	39.90 above 30 %	31340. ....	22.61 "
36786. ....	39.71 "	31342. ....	22.40 "
40277. ....	36.57 "	40279. ....	22.29 "
36783. ....	36.00 "	40278. ....	22.22 "
36785. ....	31.21 "	37694. ....	21.77 "
41155. ....	30.18 "	41514. ....	21.62 "
974. ....	30.00 "	41723. ....	21.61 "
		38560. ....	21.22 "
No. 41722. ....	29.75 above 25 %	41264. ....	21.18 "
41511. ....	29.72 "	37693. ....	20.40 "
41512. ....	29.27 "	41725. ....	20.07 "
36772. ....	28.93 "		
39522. ....	28.65 "	No. 41268. ....	19.38 above 15 %
41339. ....	28.57 "	41721. ....	19.01 "
39524. ....	28.05 "	41267. ....	18.54 "
37695. ....	27.89 "	38559. ....	18.31 "
971. ....	27.23 "	35587. ....	18.13 "
41282. ....	26.98 "	35586. ....	17.60 "
37692. ....	26.91 "	41343. ....	17.36 "
39523. ....	26.74 "	39525. ....	17.00 "
40276. ....	26.50 "	970. ....	16.91 "
41515. ....	26.42 "	35585. ....	16.24 "
39521. ....	25.98 "	35974. ....	16.06 "
41265. ....	25.76 "	35584. ....	16.06 "
36773. ....	25.49 "	38557. ....	15.92 "
		38558. ....	15.83 "
No. 41156. ....	24.93 above 20 %	40280. ....	15.37 "
41159. ....	24.73 "	38556. ....	11.77 above 10 %
35970. ....	24.46 "	41341. ....	11.42 "
36782. ....	24.06 "	35973. ....	11.10 "



1 GEORGE V., A. 1911

In Bulletin 121, the late Chief Analyst suggests standards for cream as follows:—

Whipping cream, not less than 25 per cent. butter fat.

Table           "           "           "           17·5           "           "           "

My impression is that it would be unwise to attempt the establishment of standards for different grades of cream. The time may come when legal standards of quality recognizing different grades within the species, may be justified; but, for the present, I think that the requirements of the Act, are met by the establishment of specific identity. If an article sold as wine, or coffee, or vinegar, &c., corresponds to the definitions respectively of wine, coffee and vinegar, the subordinate questions of value, from the point of view of the connoisseur, must be left to be dealt with by the purchaser himself. When the public asks for cream, it must get cream. The particular grade of cream is a matter to be settled between the buyer and seller. This leaves us face to face with the question, what is cream?

Some may say 'cream' begins where 'milk' ends. An extra rich milk may be regarded as a poor cream. This would seem to be the position taken by some vendors, because, although a milk containing 11 per cent of butter fat is quite exceptional, it is not unknown. (See Nos. 24, 65, 515, 517, 28644, &c., of Bull. 121). Were such a contention to be seriously considered, it would still be necessary to fix a minimum for fat in the article. The present report shows that only 3 samples out of 64 sold as cream, contain less than 15 per cent of fat. Twenty-nine samples reported in Bulletin 121, show an average of 22·76 per cent fat, with only one sample below 16 per cent. On the other hand, 75 per cent of these two collections (totalling 93 samples), show more than 20 per cent of butter fat in the article sold as cream.

The standard for cream established by the United States Department of Agriculture, (Circular 19, of June 26, 1906), is 18 per cent fat. Several States of the American Union have established independent standards, and these range from 15 to 30 per cent for cream. Great Britain has no legal standard for cream; but the following passage from a recent report to the Local Government Board (Food Report, No. 10, 1909) gives an idea of what is considered to be cream in England.

'None of the creameries which I visited (with two exceptions in the north of England to which reference will be made later) supplied cream containing less than 40 per cent of butter fat. In most cases the cream contained well above this quantity; about 50 per cent being a usual amount. Samples from two creameries showed on analysis as much as 59 per cent of fat. In general a somewhat higher fat content was observed in cream supplied by the firms visited in the south of England than in the north.'

It is my belief that no injustice will be done to the dealer, and that a much needed protection will be afforded to the consumer, if the following definition of cream be made legal:—

1. Cream is that portion of milk, rich in milk fat, which rises to the surface of milk on standing, or is separated from it by centrifugal force; is fresh and clean, and contains not less than eighteen (18) per cent of milk fat.

2. When guaranteed to contain a higher percentage of milk fat than eighteen (18) per cent, it must conform to such guarantee.

3. Cream must be entirely free from gelatine, sucrate of lime, gums, or other substances added with a view to give density, consistency or apparent thickness to the article.

4. Cream must contain no preservatives of any kind; nor any colouring matter, other than is natural to milk.

5. Evaporated cream, clotted cream, condensed cream, or any other preparation purporting to be a cream, (except ice cream), must conform to the definition of cream as given above, and must contain at least twenty-five (25) per cent of milk fat.

It is pretty well known that a number of articles called *Cream thickeners* are on the market. These are intended to be added to cream for the purpose of giving it an appearance of greater density and richness than it really possesses. Gelatine is a constituent of most of them; but calcium sucrate (Sucrate of lime) gum tragacanth and



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other substances are often present. Some of the cream samples of this collection were examined for 'thickeners', and evidence of gelatine was quite definitely found in 4 samples; while reactions sufficiently clear to justify a declaration of *trace of gelatine* were obtained with 9 other samples.

Evidently the cream producers of Canada are not above suspicion of employing these entirely dishonourable methods of giving a fraudulent appearance of richness to the article. This mode of fraud is particularly harmful in cases where a Dairy Company, counts among its patrons, a few who are guilty of the use of thickeners. It may be the aim of such company to supply honest cream; but, by intermixing ignorantly, a few gallons of the sophisticated article, a whole day's output may be contaminated. Of course, in such case, the company must be held responsible, should adulteration be detected. It is quite true that the guilty patron of such a company could not possibly reap any advantage to himself, provided that his cream was sold on its fat content; but agents interested in the sale of these 'cream thickeners', have been known to so misrepresent them, as to lead the purchaser to believe that his cream was actually improved by their use. The only safeguard which a Dairy Company can have, is the periodical testing of its cream for these thickeners.

On our next collection of cream, I shall see that a systematic examination for cream thickeners is made.

I beg to recommend the publication of this report as Bulletin No. 189.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



BULLETIN No. 189 CREAM.

Date of Collection.	Nature of Sample.	No. of Sample.	Cost.		Inspector's Report. — (Is not an ex- pression of opinion.)	RESULTS OF ANALYSES.				Remarks and Opinion of the Chief Analyst.
			Name and Address of Vendor.	Quantity. Price.		Name and Address of Manufacturer or Pur- nisher, as given by the Vendor.	Total Solids, p.c.	Fat, p.c.	Solids not Fat, p.c.	

DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.

1909.				\$ c.							
Aug. 12	Cream	41721	Acadia Dairy Co., Wolf-ville, N. S.	1 qt	0 25	W. W. Pineo, Water-ville, N. S.	26 61	19 01	7 60	41721	See prefatory letter.
" 17	"	41722	Scotia Pure Milk Co., Halifax, N. S.	1½ pts	0 30	Unknown	36 67	29 75	6 92	41722	
" 18	"	41723	L. S. Higgins, Halifax, N. S.	"	0 25	Wm. Moore, Shubenacadie, N. S.	28 85	21 61	7 24	41723	
" 18	"	41724	A. D. Johnson, Halifax, N. S.	"	0 23	G. Brenton, Stewiacke, N. S.	30 79	23 38	7 41	41724	
" 18	"	41725	"	"	0 23	A. G. Horne, Enfield, N. S.	27 52	20 07	7 45	41725	

DISTRICT OF PRINCE EDWARD ISLAND—THEO. MOORE, INSPECTOR.

July 23	Cream	38556	Mrs. Douglas Smith, Rustico Road.	1½ pts	0 12	Vendor	20 18	11 77	8 41	38556	See prefatory letter.
" 23	"	38557	Mrs. J. Mallett, Royalty, Charlottetown.	"	0 15	"	23 05	15 92	7 13	38557	
" 23	"	38558	W. S. Bowman, Royalty, Charlottetown.	"	0 15	"	23 24	15 83	7 41	38558	
" 23	"	38559	Mrs. J. P. Wood, Alexandria.	"	0 15	"	25 82	18 31	7 51	38559	
" 23	"	38560	Mrs. E. K. Scott, North River.	"	0 15	"	28 77	21 22	7 55	38560	



DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON, INSPECTOR.

July 26....	Cream....	39521	Maritime Dairy Co., St. John, N.B.	1 qt....	0 30	Maritime Dairy Co., Sussex, N.B.	32 68	25 98	6 70	39521
" 26....	"	39522	St. John Creamery Co., St. John, N.B.	"	0 30	Several Farmers	35 84	28 65	7 19	39522
Aug. 7....	"	39523	C. J. Bodkin, Fredericton, N.B.	"	0 30	"	33 57	26 74	6 83	39523
" 17....	"	39524	Maritime Dairy Co., Ltd., Sussex, N.B.	"	0 25	"	34 85	28 05	6 80	39524
" 18....	"	39525	G. O. Stratton, Moncton, N.B.	"	0 30	Moncton Pasteurized Milk Co., Sunny Brae, N.B.	24 46	17 00	7 46	39525

DISTRICT OF QUEBEC—E. BELAND, INSPECTOR.

July 16 ...	Cream.....	36782	Joseph Mailhout, Beaufort.	1 1/2 pts...	0 20	Vendor.....	30 80	24 06	6 74	36782
" 16....	"	36783	Mad. Grenier,	"	0 20	"	42 05	36 00	6 05	36783
" 16....	"	36784	Joseph Parent,	"	0 20	"	49 20	42 66	6 54	36784
" 16....	"	36785	Francis Bedard,	"	0 20	"	37 57	31 21	6 36	36785
" 16....	"	36786	Veuve Compagna,	"	0 20	"	45 84	39 71	6 13	36786

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

July 20 ...	Cream.....	970	W. J. Gobeil, Farnham	1 qt. ...	0 20	Vendor	24 43	16 91	7 52	970
" 23....	"	971	A. Mathieu, Victoriaville.	"	0 30	"	33 83	27 23	6 60	971
" 21 ...	"	972	H. Peltier, Rapid Plat, St. Hyacinthe.	"	0 25	"	36 07	28 93	7 14	972
" 21....	"	973	B. Lemieux, Ravy St. Francois, St. Hyacinthe.	"	0 25	"	33 01	25 49	7 52	973
" 21....	"	974	Frs. Belanger, Rapid Plat, St. Hyacinthe.	"	0 25	"	36 58	30 00	6 58	974

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

July 21 ...	Cream.....	40276	Standard Dairy Co., Montreal.	Mon-1 qt ..	0 30	E. L. Magne, Warden, P.Q.	33 54	26 50	7 04	40276
" 23 ...	"	40277	G. Jubinville, 90 Roy St., Montreal.	"	0 40	Unknown	42 80	36 57	6 23	40277
" 23 ...	"	40278	Romeo Bernard, 91 Lagache- chetiere St. E., Montreal.	"	0 30	Montreal Dairy Co.,	29 20	22 22	6 98	40278
" 23 ...	"	40279	P. Brunet, 159 Lagache- tiere St. E., Montreal.	"	0 30	"	29 35	22 99	7 06	40279
" 23....	"	40280	Mrs. Pelletier, 645 Demon- tigny St. E., Montreal.	"	0 24	Montreal Dairy.....	23 19	15 37	7 82	40280



BULLETIN 189 CREAM.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Quantity.	Cost.	Inspector's Report.	RESULTS OF ANALYSIS.				Remarks and Opinion of the Chief Analyst.
							Total Solids, per cent.	Fat, per cent.	Solids not Fat, per cent.	No. of Sample.	
DISTRICT OF OTTAWA—J. A. RICEY, INSPECTOR.											
1909.											
Aug. 20....	Cream.....	41264	The Ottawa Dairy Co., Ltd., Ottawa.	1 qt.	0 40	Vendors.....	28 55	21 18	7 37	41264	
" 20....	" .....	41265	The Ottawa Dairy Co., Ltd., Ottawa.	"	0 50	" .....	32 84	25 78	7 06	41265	
" 20....	" .....	41267	The Alderney Dairy Co., Ottawa.	"	0 40	Experimental Farm, Ottawa.	26 35	18 54	7 81	41267	
" 23....	" .....	41268	R. Allen, Ottawa.....	"	0 30	Vendor.....	27 00	19 38	7 62	41268	
" 25....	" .....	41282	P. Clarke, Deschenes, P.Q.	"	0 50	" .....	33 98	26 98	7 00	41282	
DISTRICT OF KINGSTON—JAS. HOGAN, INSPECTOR.											
Aug. 4....	Cream.....	41155	Kirk & Lee, Kingston.	1 qt.	0 25	Vendors.....	37 06	30 18	6 88	41155	
" 4....	" .....	41156	T. F. Auld, "	"	0 40	Vendor.....	32 33	24 93	7 40	41156	
" 4....	" .....	41157	Kirk & Lee, "	"	0 40	Vendors.....	46 16	39 90	6 26	41157	
" 4....	" .....	41158	J. Knight, "	"	0 30	Vendor.....	31 22	23 61	7 61	41158	
" 4....	" .....	41159	G. Masoud, "	"	0 40	A. Gibbony.....	32 32	24 73	7 59	41159	
DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.											
Aug. 11....	Cream.....	41339	Hamilton Dairy and Cream Co., Hamilton.	1 qt.	0 25	Vendors.....	35 27	28 57	6 70	41339	
" 11....	" .....	41340	The Coverdale Creamery Co., Hamilton.	"	0 35	" .....	29 90	22 61	7 29	41340	
" 17....	" .....	41341	John Tingle, 314 Gerrard St. E., Toronto.	"	0 25	Vendor.....	19 02	11 42	7 60	41341	
" 17....	" .....	41342	J. V. Moore, 199 Wilton Ave., Toronto.	"	0 40	" .....	30 07	22 40	7 67	41342	
" 17....	" .....	41343	H. Taylor, 235 Church St., Toronto.	"	0 40	" .....	25 18	17 36	7 82	41343	



DISTRICT OF WINDSOR JNO. TALBOT, INSPECTOR.

July 21...	Cream	35970 Geo. Peters, London	1 qt.	50 Geo. Barker, London Tp.	30 60	24 46	6 14	35970
" 21 ..	"	35971 J. Fawkes, London	"	30 W. Sloan,	30 76	23 72	7 04	35971
" 21 ..	"	35972 J. W. Griffiths, London	"	35 Vendor	46 24	40 12	6 12	35972
" 21 ..	"	35973 G. W. Kent, London	"	30 Saul Crumlin	18 68	11 10	7 58	35973
" 21 ..	"	35974 J. D. Ross, London	"	20 Vendor	23 84	16 06	7 78	35974

DISTRICT OF CALGARY R. W. FLETCHER, INSPECTOR.

July 30...	Cream	35583 Nicholls & Shepherd, Cal	1 qt	0 40 Vendors	30 58	22 92	7 66	35583
" 30 ..	"	35584 Bud Pallesen, Calgary.	"	0 40 Vendor	24 46	16 06	8 40	35584
" 30 ..	"	35585 T. Laycock & Co., Calgary.	"	0 40 Vendors	24 31	16 24	8 07	35585
" 30 ..	"	35586 W. Miller, Calgary.	"	0 40 Vendor.	25 68	17 60	8 08	35586
" 30 ..	"	35587 Sadler & Gordon, Calgary.	"	0 40 Vendors	26 33	18 13	8 20	35587

DISTRICT OF VANCOUVER JNO. F. POWER, INSPECTOR.

July 23 ..	Cream	37691 City Dairy, Vancouver	30 oz.	0 45 Vendor	*			37691
" 23 ..	"	37692 Richmond Dairy, "	"	0 50 "	33 38	26 91	6 47	37692
" 23 ..	"	37693 F. Scott,	"	0 50 Richmond Dairy, Van-	27 43	20 40	7 03	37693
				cover.				
" 23 ..	"	37694 Crystal Dairy,	"	0 50 Vendor	28 82	21 77	7 05	37694
" 24 ..	"	37695 Crown Dairy,	"	0 40 "	34 41	27 89	6 52	37695

DISTRICT OF VICTORIA D. O'SULLIVAN, INSPECTOR.

July 30 ..	Cream	41511 City Dairy, Victoria	1 qt	0 40 B. C. Milk Condensing	36 60	29 72	6 88	41511
" 30 ..	"	41512 Royal Dairy, "	"	Co., New Westminster	36 24	29 27	6 97	41512
" 31 ..	"	41513 Victoria Creamery Assn.,	"	0 30 "	47 22	41 27	5 95	41513
		Victoria.		0 50 "				
Aug. 5 ..	"	41514 Windsor Grocery Co., Vic	"	0 60 Alfred Few, Victoria,	28 84	21 62	7 22	41514
		toria.		B.C.				
" 6 ..	"	41515 D. H. Ross & Co., Victoria,	"	0 60 E. Freeman, Victoria,	34 01	26 42	7 59	41515
				B.C.				

Sample broken in transit.







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## APPENDIX K.

## BULLETIN No. 190—ICE CREAM.

OTTAWA, September 28, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to hand you a report upon 140 samples purchased by our inspectors as Ice Cream. The inspection was made during the months of July and August, and all the inspectoral districts are represented except Manitoba.

One sample (No. 41701) from Nova Scotia was broken in carriage; and all the samples (10 in number) from Vancouver, arrived in spoiled condition. This was partly due to the extreme heat of summer, and the length of the journey, but in part also to the incomplete filling of bottles, which thus permitted of churning in transit. The samples from Victoria came in fairly good condition, in spite of the great distance.

Of 129 samples worked, the following summary of results in milk fat is interesting.

District.	BUTTER FAT, PERCENTAGE ABOVE																		
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
Nova Scotia	1		1					1	2		3		1						
Prince Edward Island			1				1	1	2	2		1			2				
New Brunswick	1		3			1		1	1	1						1		1	
Quebec						2			1	1		1						3	2
St. Hyacinthe	2		1	1		1	1	1			1	1				1			
Montreal	3			2	2		1	2											
Ottawa	1					1	1		2		2		2		1				
Kingston	5	2					1	1	1										
Toronto		1	1	2		1		1	2	1					1				
London	2	1		2	1	1	1	1			1								
Windsor	1		1		2	2		2	1				1						
Calgary	1			2		2		1	2	2									
Victoria			1		1	2	1	1	3		1								
Total	17	4	9	9	6	13	7	13	17	7	8	3	4	1	3	2		4	2
	45					57					27								

It thus appears that 45 samples, or 35 per cent of the collection, contain above 15 per cent of milk fat; 57 samples, or 44 per cent of the collection, contain above 10 per cent of fat; while 27 samples, or 21 per cent of the collection contain not more than 10 per cent of fat.

The United States standard for milk fat in ice cream is 14 per cent, and appears to be a reasonable one so far as my investigation goes. Of the present collection, 65 samples or more than 50 per cent meet this standard. Of 80 samples reported in 1908, (See Bull. No. 162) 50 per cent reached the standard for fat just referred to.



1 GEORGE V., A. 1911

I have recently (See Bull. 189) recommended a standard of 18 per cent for cream. The use of cream of this description, together with sugar and such other ingredients as may be permissible in ice cream, as flavours and stiffeners, will, I am given to understand, result in a product containing about 14 to 15 per cent of milk fat. Where fruit or nuts are used to give flavours, the fat content will be slightly reduced, and I think that, in ice cream of this character, it may be reasonable to require 12 per cent of milk fat. Such ice creams, as a condition of their securing the advantage of lowered fat content, should be sold as 'true fruit,' or as 'nut' ice creams.

In the absence of any legal definition of ice cream, it is impossible to designate any of the samples herein reported as adulterated, in regard to their fat content; but I have described those which contain not more than 10 per cent of fat, as of 'poor quality,' and those containing not more than 6 per cent fat as of 'very poor quality'; while numbers 39519, 36787, 36791, 36792, 36795 and 36796, which contain no more fat than is usually found in ordinary milk, are certainly not entitled to the name cream at all.

It is quite certain that the public expects ice cream to possess a flavour which may be given to it either by the actual addition of fruit or nuts, or cocoa, &c., or by the use of a fruit extract or essence, natural or artificial. So long as this flavour is not injurious to health, there can be no more objection to its employment in ice cream, than in candy or other food. When added as real fruit, the water contained in the fruit reduces the fat percentage in the finished article, and for this reason I have recommended that a minimum of 12 per cent fat be accepted for ice cream, acknowledged to be made with actual fruit, or with nuts.

The question of dyes in ice cream must be decided upon the same lines as are considered in dyed candies, preserves, &c. So long as the dye used is harmless to the health, in the proportions employed, there would seem to be no objection to its use. I am not yet in a position, to give a list of dye-stuffs, which can be authoritatively recommended for the purpose. Where true fruit, cocoa or nuts are employed as flavours, no dye stuff would seem to be needed. It is claimed that certain aniline colours are now obtainable of such high degree of purity as to make their use safe in foods. The subject is under investigation.

It was formerly usual for the purveyors of ice cream to manufacture the article themselves. At the present time it is quite a usual thing for ice cream to be sold many hundreds of miles from the place of its production. This is an innovation which is indubitably to the advantage of the public, since it permits the furnishing of a desirable article of food to persons living in localities where cream is scarce or unknown. Section 24 (a) of the Adulteration Act (R.S. 1906, Chap. 133) expressly provides that 'no food or drug shall be deemed adulterated, when any matter or ingredient, not injurious to health, has been added to the food or drug, in case such matter or ingredient is required for the production or preparation thereof, as an article of commerce, in a state fit for carriage or consumption, if the same has not been fraudulently added to such food or drug, for the purpose of increasing the bulk, weight or measure thereof, or to conceal its inferior quality, and each package, roll, parcel or vessel containing such article of food or drug, manufactured, sold or exposed for sale, is distinctly labelled as a mixture in conspicuous characters, forming an inseparable part of a general label thereon, bearing the name and address of the manufacturer.'

Shippers of ice cream find it advantageous, if not absolutely necessary, to add to the article a so-called 'thickener' or 'stiffener,' which is usually gelatine but may be gum tragacanth, or other gum or even gelatinized corn starch. If these thickeners, or certain of them, could be recognized as essential ingredients of ice cream, and incorporated into the definition of ice cream, as may properly enough be done with the sugar, fruit, cocoa or nuts added, there would be no need of placing the word 'mixture' or 'compound' on the label. It is claimed by manufacturers that a prejudice against all articles so declared exists to a degree which would seriously interfere with the sale of an ice cream branded as 'compound'; although the addition of the thickener is made strictly in the interest of the consumer. Purchasers of ice cream desire a firm article, and manufacturers assert that this demand cannot be met unless a thickener is added.



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On the other hand, it is evident that, by the use of a thickener, an ice cream which is very poor in cream, may be made to appear much better than it really is. Such articles as contain less than 10 per cent of fat may find sale when very hard frozen or when stiffened with starch or gelatine, but could not bear transportation, or be sold to discriminating customers. It will be noted that most of the samples reported herein, which contain not more than 10 per cent of fat, contain at the same time, a thickener or stiffener, which in such cases has evidently been added to conceal defect, or to give an apparent value greater than the real value. At the same time it is noteworthy that out of 58 samples which have more than 14 per cent of fat, 25 samples contain stiffeners. And in this connection I may say that the number of samples containing stiffeners may be larger than is shown by the analytical results, since it is known that other substances than those which were looked for, are capable of acting as stiffeners, and may have been present without detection.

It is fair to urge that makers of ice cream containing true fruit, or nuts or cocoa, have no objection to naming these ingredients.

Thus we find fruit ice cream, nut ice cream, chocolate ice cream, regular articles of commerce. But nobody advertises gelatine ice cream, or corn-starch ice cream, or gum tragacanth ice cream, or stiffened ice cream. This seems to point to a general impression that gelatine and other thickeners, are foreign to true ice cream; and are capable of being employed to the detriment of the purchaser.

It may be that the requirement of a minimum of 14 per cent of milk fat in ice cream, would justify the use of a stiffener as well. The stiffener could not be added to conceal defect if the required percentage of milk fat were also present. A very strict enforcement of the penalty for infringement of the Act, in the case of ice cream, would then be called for, since the public would be at the mercy of the manufacturer.

I beg to recommend the publication of this report as Bulletin No. 190.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



BULLETIN No. 190—ICE CREAM.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of the Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report.  (Is not an expression of opinion.)	RESULTS OF ANALYSIS.				No. of Sample.	Remarks, and Opinion of the Chief Analyst.
				Quantity.	Cents.			Total Solids.	Fat.	Gelatine.	Starch.		

DISTRICT OF NOVA SCOTIA R. J. WAUGH, INSPECTOR.													
1909.													
Aug. 3.	Ice Cream.	41701	N. W. Mason, Glasgow, N.S.	New 1 qt.	40	Vendor.						41701	
" 4	"	41702	W. B. Murphy, Truro, N.S.	1 "	40	"	Vanilla	31.98	10.20			41702	Poor quality.
" 4	"	41703	W. E. Bates, Truro, N.S.	1 "	50	"	Maple	38.32	18.90	present		41703	
" 10	"	41704	Kandy Kitchen, Yarmouth, N.S.	Var 1 "	60	"	Pine Apple	35.50	10.02		present	41704	Poor quality.
" 10	"	41705	Jas. Rozer, Yarmouth, N.S.	1 "	60	"	Chocolate	34.64	10.84			41705	"
" 11	"	41706	Mrs. Moore, Kentville, N.S.	1 "	40	"	Ginger	31.70	8.69			41706	"
" 17	"	41707	Scotia Pure Milk Co., Halifax, N.S.	1 "	40	"	Vanilla	27.37	12.15	present		41707	
" 17	"	41708	D. R. Ross, Halifax, N.S.	1 "	40	"	"	34.75	12.17			41708	
" 17	"	41709	Wm. Patrick, Halifax, N.S.	1 "	50	"	Peach	34.01	13.58	present		41709	
" 18	"	41710	F. W. Cookson, Halifax, N.S.	1 "	50	"	Vanilla	36.46	22.81			41710	

DISTRICT OF PRINCE EDWARD ISLAND—T. MOORE, INSPECTOR.

July 21	Ice Cream.	38546	A. Richey, Murray 1½ pt. 38 River.			Vendor		29.43	14.20			38546	
" 21	"	38547	Mrs. Jas. Vatcher, 1½ " 35 Charlottetown.			"		22.86	6.24		present	38547	Very poor quality.



July 21.	Ice Cream.	38548	Mrs. W. F. Carter, 1½ "	38	"	.....	30·37	13 52	.....	38548
"	"	38549	Charlotte town. E. J. DesRoches, Char- lottesville.	1½ "	38	"	34·18	18 86	.....	38549
"	"	38550	Mills Bros., Charlotte- town.	1½ "	38	"	27·86	12·63	.....	38550
"	"	38551	J. J. Gaudet, Summer- side.	1½ "	35	"	30·70	11 70	.....	38551
"	"	38552	G. W. Warren, Sum- merside.	1½ "	35	"	37·56	12 93	present	38552
"	"	38553	J. H. Lock, Summer- side.	1½ "	38	"	31·36	11 84	.....	38553
"	"	38554	Mrs. C. A. Bent, Sum- merside.	1½ "	35	"	23·41	6 23	present	38554
"	"	38555	R. S. Mason, Charlotte- town.	1½ "	38	"	28·62	9 62	.....	38555

DISTRICT OF NEW BRUNSWICK J. C. FERGUSON, INSPECTOR.

July 27	Ice Cream.	39511	Sanford W. Seannell, St. John, N.B.	1 qt	60	Vendor	.....	Chocolate...	35 77	18 62,	... ..	39511
" 27...	"	39512	A. J. Russell, St. John, N.B.	1 "	40	"	.....	Strawberry.	33 64	15 14	... ..	39512
Aug. 5...	"	39513	C. Carrara, St. Stephen, N.B.	1 "	40	"	.....	Vanilla ....	29 65	12 95	... present	39513
" 7...	"	39514	Lloyd W. Vanwart, Fredericton, N.B.	1 "	45	"	.....	"	32 08	11 17	present	39514
" 7...	"	39515	E. S. Washington, Fredericton, N.B.	1 "	50	"	.....	Strawberry.	29 10	5 35	... ..	39515
" 10.	"	39516	R. E. Holyoke, Wood- stock, N.B.	1 "	40	"	.....	Chocolate...	38 84	18 73	... ..	39516
" 17...	"	39517	Daniel A. Vail, Sussex, N.B.	1 "	50	"	.....	Strawberry.	39 50	18 40	... ..	39517
" 18...	"	39518	William McMullen, Moncton, N.B.	1 "	40	"	.....	Vanilla ....	39 54	13 11	... present	39518
" 19...	"	39519	A. C. Woods, Chatham, N.B.	1 "	50	"	.....	Strawberry.	25 42	3 32	present	39519
" 19...	"	39520	William Corbett, New- castle, N.B.	1 "	50	Maritime Dairy Co., Ltd., Sussex, N.B.	.....	Vanilla ....	39 31	22 81	... trace	39520

## DISTRICT OF QUEBEC: E. BELAND, INSPECTOR.

July 16.	Ice-Cream.	36787 A.	Boucher, 366 St. 1½ pt	35	Jos. Julien, St. Joseph St., Quebec.	25.30	3.60	.....	36787	Is in no real sense a cream.
16.	"	36788	Jos. Vaillancourt, 358 St. 1½	30	Carrier, Beaumont	34.20	9.30	.....	36788	Poor quality.

\* Both samples broken. † Contains a small amount of aniline dye. ‡ Small amount of aniline dye present. § Contains aniline dye.



BULLETIN No. 190—ICE CREAM.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of the Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.					No. of Sample.	Remarks and Opinion of the Chief Analyst.	
				Quantity.	Price.			Total Solids.	Fat.	Starch.					
DISTRICT OF QUEBEC—E. BELAND, INSPECTOR—Cont.															
July 16	Ice-Cream.	36789	W. A. Hamelin, 300 St. 1 <sup>re</sup> Joseph St., Quebec.	30	30	Leger, Pares, Levis		p.c. 39 50	p.c. 15 78		36789				
" 16	"	36790	A. Dion, 280 St. Joseph 1 <sup>re</sup> St., Quebec.	30	30	"		32 40	15 57		36790				
" 16	"	36791	W. Morissette, 630 St. 1 <sup>re</sup> St., Quebec.	30	30	Unknown		25 00	2 80		36791	Is in no real cream.			
" 16	"	36792	E. Clement, 785 St. 1 <sup>re</sup> St., Quebec.	30	30	Bernier, Levis		26 30	3 04		36792	"			
" 16	"	36793	" " " " " " " "	30	30	"		36 12	12 97		36793	"			
" 16	"	36794	E. L. Boileau, 836 St. 1 <sup>re</sup> St., Quebec.	30	30	Garrin, Levis		35 71	11 38		36794				
" 16	"	36795	T. A. Tesson, 7 Kent 1 <sup>re</sup> St., Quebec.	30	30	A. Gagnette, St. Simeon, Quebec.		23 53	3 55		36795	Is in no real cream.			
" 16	"	36796	E. Chaland, 127 St. 1 <sup>re</sup> St., Quebec.	30	30	Falardeau, Lorette		28 66	2 66	present	36796	"			

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

July 19	Ice-Cream.	959	G. L. Leclair, Farnham, 1 qt	50	Vendor			30 56	15 28		959	
" 20	"	960	Louis Ezzo, St. Jean, 1 "	35	"			39 17	21 42	present	960	
" 21	"	961	A. A. Larochelle, Sorel, 1 "	40	"			31 16	5 90	Small amount present.	961	Very poor quality.
" 21	"	962	Andrew Giamontso, Sorel, 1 "	35	"			36 77	18 83		962	
" 21	"	963	G. Morel, Nicolet, 1 "	40	"			31 85	13 06	present	963	



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"	22	"	"	964 A. Normandier, Vie 1 "	45	"	"	31 87	10 98	present	964 Poor quality.
Aug.	2	"	"	965 J. A. Jarmelle, Rich 1 "	50	"	"	36 78	20 63	"	965
"	2	"	"	966 O. DesRochers, Wind 1 "	40	"	"	28 01	9 81	"	966 Poor quality.
"	5	"	"	967 G. B. Couture, Her 1 "	60	"	"	30 87	14 52	"	967
"	6	"	"	968 O. Perron, St. Hyacin 1 "	50	"	"	39 83	17 40	"	968

## DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

July	21	Ice-Cream.	40266 G. N. Salliani, 1 Notre 1 qt	45	Vendor	"	"	34 28	16 91	"	40266
"	21	"	40267 W. Love, 739 St. Law 1 "	50	"	"	"	36 42	17 00	"	40267
"	21	"	40268 Standard Dairy Co., 1 "	50	Vendors	"	"	33 02	17 14	"	40268
"	22	"	40269 N. Bonfin, Valleyfield, 1 "	40	Vendor	"	"	39 41	16 80	"	40269
"	23	"	40270 G. Jubinville, 90 Roy 1 "	40	"	"	"	38 18	20 55	"	40270
"	26	"	40271 J. D. Duncan Co., 1 "	60	Vendors	"	"	42 52	20 18	present	40271
"	26	"	40272 A. Boosamara, 2 Notre 1 "	50	Vendor	"	"	34 77	13 23	"	40272
"	26	"	40273 J. B. Hawick, St. Law 1 "	40	"	"	"	34 80	14 25	"	40273
"	26	"	40274 W. J. Scott, 248 St. 1 "	50	"	"	"	37 57	13 56	"	40274
"	26	"	40275 Imperial Ice-Cream Co., 1 "	40	Vendors	"	"	41 90	22 06	"	40275

## DISTRICT OF OTTAWA—J. A. RICKY, INSPECTOR.

Aug.	7	Ice-Cream.	41254 L. Watson, Arnprior 1 qt	30	Vendor	"	"	34 42	8 15	present	41254 Poor quality.
"	12	"	41255 C. E. Barnhart, Max 1 "	50	"	"	"	36 50	20 58	"	41255
"	13	"	41256 F. Rogers, Ottawa, 1 "	50	"	"	"	34 27	10 52	"	41256 Poor quality.



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			(Quantity.)	(Cents.)				Total Solids.	Fat.	(Gelatin.)	Starch.		
DISTRICT OF OTTAWA J. A. RICEY, INSPECTOR. Con.													
1909.								p.c.	p.c.				
Aug. 13	Ice Cream.	41257	C. Maltezos, Ottawa.	1 qt.	50	Vendor	.....	31.90	12.62	present	.....	41257	
" 13.	"	41258	H. N. Anstiss, Ottawa.	1 "	60	"	.....	29.77	14.88	"	.....	41258	
" 14	"	41259	P. Conlin, Gananoque	1 "	60	"	.....	39.23	15.60	.....	.....	41259	
" 19	"	41260	E. A. Lisk, Eganville.	1 "	50	"	.....	29.45	6.36	.....	.....	41260	Very poor quality.
" 20	"	41261	J. H. Pettypiece, Ot- tawa.	1 "	50	"	.....	30.98	12.92	.....	.....	41261	
" 20.	"	41262	T. D. Sayer, Aylmer	1 "	50	"	.....	32.80	8.27	.....	trace	41262	Poor quality.
" 21.	"	41263	Jno. T. Scott, Almonte.	1 "	40	"	.....	32.15	10.30	.....	"	41263	"
DISTRICT OF KINGSTON JAS. HOGAN, INSPECTOR.													
Aug. 4.	Ice Cream.	41145	A. J. Rees, Kingston.	1 qt.	50	Vendor	.....	39.65	19.15	.....	.....	41145	
" 4.	"	41146	J. Frasso, Kingston.	1 "	40	"	.....	36.86	12.91	.....	.....	41146	
" 4.	"	41147	J. Alkis, Kingston.	1 "	35	"	.....	45.59	23.97	.....	.....	41147	
" 4.	"	41148	H. Turk, Kingston.	1 "	40	"	.....	31.12	20.28	.....	.....	41148	
" 4	"	41149	H. F. Prices, Kingston.	1 "	35	"	.....	39.76	21.65	.....	.....	41149	
" 4.	"	41150	F. Hoag, Kingston	1 "	50	"	.....	34.50	14.45	.....	.....	41150	



"	4.	"	41151	G. Masoud, Kingston.	1 "	40	"	.....	35 54	20 15	.....	41151
"	4	"	41152	T. Sakellaris, Kingston.	1 "	50	"	.....	35 50	20 16	.....	41152
"	4.	"	41153	J. McLaughlin, Kingston.	1 "	50	"	.....	35 48	13 73	.....	41153
"	4.	"	41154	J. E. Chown, Kingston.	1 "	50	"	.....	38 13	19 92	.....	41154

DISTRICT OF TORONTO H. J. DAGGER, INSPECTOR.

Aug.	3.	Ice Cream.	41309	A. D. Smith, St. Catharines.	1½ pts.	20	Vendor	.....	33 36	15 92	.....	41309
"	3	"	41310	Lowell E. A. Jeans, St. Catharines.	1½ "	20	"	.....	37 23	17 72	present	41310
"	4.	"	†41311	Wm. Norwich, Falls.	1 qt.	40	"	.....	34 01	12 90	.....	41311
"	4.	"	41312	H. W. Pew, Falls.	1½ pts.	30	Gay Bros., Niagara Falls.	.....	32 74	12 05	.....	41312
"	11	"	†41313	J. H. Assem, Hamilton.	1½ "	25	Vendor	.....	33 02	11 44	Large amount present	41313
"	11.	"	41314	Jas. Crawford, Hamilton.	1½ "	25	"	.....	39 18	17 13	.....	41314
"	16.	"	41315	Devonshire Mfg. Co., Toronto.	1½ "	30	Vendors	.....	23 85	7 83	present	41315
"	16.	"	41316	The Harry Webb Co., Ltd., Toronto.	1½ "	38	"	.....	44 73	19 05	.....	41316
"	16.	"	41317	The Patterson Candy Co., Toronto.	1½ "	40	"	.....	35 09	13 77	present	41317
"	16.	"	†41318	The Maple Farm Dairy, Toronto.	1½ "	15	"	.....	39 44	18 26	.....	41318

DISTRICT OF LONDON—T. KIDD, INSPECTOR.

July	22.	Ice Cream.	30687	Yates & Thomas, Guelph.	1½ pts.	60	Vendors	.....	35 41	13 57	present	30687
"	22.	"	30688	Kallop & Spelos, Guelph.	1½ "	65	"	.....	33 03	14 15	"	30688
"	23	"	30696	Chas. Gough, Stratford.	1½ "	60	Vendor	.....	36 30	19 29	.....	30696
"	23	"	30697	W. R. Raffery, Stratford.	1½ "	60	"	.....	33 61	17 80	.....	30697
"	26.	"	30803	J. J. Edward, Goderich.	1 pt	25	"	.....	35 24	20 96	.....	30803
"	26	"	30804	Harry Edward, Goderich.	1 "	30	"	.....	33 98	17 55	.....	30804

\*Strongly dyed with aniline dye. †Contains small amount of aniline dye. ‡Small amount of aniline dye present.



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								T and S %.	Fat.	Choline.	Starch.		
DISTRICT OF LONDON T. KIDD, INSPECTOR. Con.													
1909.								per.	per.				
July 27.	Ice Cream.	30806	Oscar Neill, Southwark.	1½ pds.	60	Vendor.		39.72	23.37	present		30806	
" 27	"	30807	Chas. Abernethy, Southwark.	1½ "	60	"		38.96	16.25			30807	
" 29.	"	30814	W. W. Nimmons, Clinton St.	1½ "	60	"		32.84	10.12	Large amount present		30814	Poor quality.
" 29	"	30815	H. Barthoff, Clinton St.	1½ "	60	"		34.67	15.26	present		30815	
DISTRICT OF WINDSOR JNO. TALBOT, INSPECTOR.													
July 16	Ice Cream	35960	Geo. Spearn, London	1 qt	40	Geo. Spearn, 188 Hamilton Road, London.		35.21	8.24	present		35960	Poor quality
" 16	"	35961	Robt. Gilmore, "	1 "	40	Olympia Ice Cream Co., London.		36.13	13.36			35961	
" 16	"	35962	R. W. Burrell, "	1 "	40	"		38.38	13.00			35962	
" 20	"	35963	P. L. R. Scott, Port Stanley.	1 "	50	Vendor		36.15	15.30	trace		35963	
" 20	"	35964	Alpha Hall, "	1 "	50	"		30.11	18.20	present		35964	
" 20	"	35965	C. Meyers, "	1 "	25	City Creamery, London.		32.00	16.11			35965	
" 20	"	35966	R. C. Herriek, "	1 "	35	Vendor		31.93	15.65			35966	
" 20	"	35967	E. Jessop, "	1 "	40	R. H. Battie, St Thomas.		31.96	16.65			35967	
" 20	"	35968	W. T. Bell, Port Stanley Beach.	1 "	40	Vendor		43.95	24.68	present		35968	
" 20	"	35969	T. Bowlby, Port Stanley.	1 "	35	Sain & Balkwill, St. Thomas.		28.71	12.54	trace		35969	



DISTRICT OF CALGARY R. W. FLETCHER, INSPECTOR.

July 28.	Ice Cream	28989 F. Rochon, Calgary.	1 qt	50	Vendor	38 95	11 75	present	28989
" 28.	"	28990 Oliver & Dewar, "	1 " "	50	Vendors	31 77	12 22		28990
" 28.	"	28991 H. J. Hurd, "	1 " "	60	Vendor	33 68	15 38		28991
" 28.	"	28992 Mrs. Stirrett, "	1 " "	60	"	32 70	17 55		28992
" 29.	"	28993 S. E. Morrow, "	1 " "	60	H. J. Hurd, Calgary	12 75	21 64		28993
" 29.	"	28994 Mrs. Gill, "	1 " "	60	"	38 34	17 10		28994
" 29.	"	28995 Mrs. Phillips, "	1 " "	60	F. Rochon, Calgary	30 82	11 50		28995
" 29.	"	28996 C. Andrews, "	1 " "	60	H. J. Hurd, "	30 40	15 08		28996
" 29.	"	28997 Oliver & Dewar, "	1 " "	60	Vendors	31 46	12 47		28997
" 29.	"	28998 O. N. Bott, "	1 " "	60	Vendor	32 60	13 81		28998

DISTRICT OF VANCOUVER J. E. POWER, INSPECTOR.

July 27.	Ice Cream	37706 New Westminster Creamery, New Westminister.	1 qt	50	Vendors	Vanilla			37706
" 27.	"	37707 Innes & Reid, "	1 " "	50	"	"			37707
" 27.	"	37708 Frisco Candy Co., Van couver.	1 " "	50	"	"			37708
" 28.	"	37709 Crescent Creamery, Vancouver.	1 " "	50	"	"			37709
" 29.	"	37710 Almonds Dairy, Van couver.	1 " "	50	Vendor	"			37710
" 29.	"	37711 J. Frenchalk, Van couver.	1 " "	50	"	"			37711
" 29.	"	37712 S. Dol, Vancouver.	1 " "	60	"	Chocolate			37712
" 29.	"	37713 Royal Candy Co., Van couver.	1 " "	1 30	Vendor	Vanilla			37713
" 30.	"	37714 Athens Candy Co., Van couver.	1 " "	60	"	"			37714
" 31.	"	37715 S. Demetris, Vancouver.	1 " "	50	Vendor	"			37715

None of the samples from Vancouver were received in good condition. The extreme heat of summer, and the long distance, are chiefly responsible for this; but it is to some extent due to incomplete filling of containers.

1 Sample badly churned.



BULLETIN No. 190—ICE CREAM.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.		Quantity. (Weight.)	Cost.	Name and Address of the Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.			No. of Sample.	Remarks, and opinion of the Chief Analyst.
									Total Solids.	Fat.	Relative Gelatin.		
									p.c.	p.c.			
1909.													
July 27	Ice Cream	41501	H. A. Lilley, Victoria, B.C.	1 qt.	40	Vendor			32.23	12.55		41501	
" 27	"	41502	G. H. Keays, Victoria, B.C.	1 "	50	Royal Dairy			34.52	14.60		41502	
" 27	"	41503	F. Vasselatos, Victoria, B.C.	1 "	50	Vict. Creamery Assn.			33.25	15.15	present	41503	
" 28	"	41504	A. Bancroft, Victoria, B.C.	1 "	50	Vendor			36.30	18.37	"	41504	
" 28	"	41505	V. Stranalaras, Victoria, B.C.	1 "	25	"			22.34	10.78	present	41505	Poor quality.
" 28	"	41506	Harcup & Antipas, Victoria, B.C.	1 "	50	Vendors			39.97	15.58	"	41506	
" 30	"	41507	City Dairy, Victoria, B.C.	1 "	25	B. C. Milk Condensing Co., New Westminster			34.32	12.78	"	41507	
" 30	"	41508	Royal Dairy, Victoria, B.C.	1 "	25	Vendor			33.28	13.55		41508	
" 30	"	41509	Victoria Creamery Assn., Victoria, B.C.	1 "	50	Vendors			36.38	16.61	present	41509	
Aug. 9	"	41510	W. S. Terry, Victoria, B.C.	1 "	25	Vendor			32.31	12.07	present	41510	



## APPENDIX L.

## BULLETIN No. 191—BRAN, SHORTS, CHOP-FEED.

OTTAWA, November 2, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to submit herewith the results of analysis of 545 samples of bran, shorts and chop feeds, collected throughout Canada, in April, May and June of this year.

These are classified as follows :—

Bran .....	148 samples.....	(See Table II)
Shorts and Middlings .	258 “ .....	(See Table III)
Chop-Feeds.....	135 “ .....	(See Table IV)
Exceptional .....	4 .....	
Total .....	545	

This collection has special reference to the requirements of the Commercial Feeding Stuffs Act, of this year. Under the Act mentioned, which becomes operative with the beginning of the new year (January 1st, 1910), it is obligatory upon manufacturers of Feeding Stuffs, with certain exceptions, to place them on sale with a definite guarantee of their value in protein and fat, and to specify the maximum amount of crude fibre they contain.

Exceptions are made in the following cases: Hay and straw, roots, grains ground or unground either from a single species or mixed species; wet brewers grains, bran or middlings.

The reasons for these exceptions will appear on consideration of the facts that, in the cases of hay, straw and roots, the purchaser is competent to judge the value of what is offered to him. Wet brewers grains are assumed to be fairly definite in value, and on account of their low value, to be little liable to adulteration. Bran and middlings (shorts) are definable under Section 26 of the Adulteration Act. Whole grains of mixed or unmixed species, and ground or unground, may be designated as chop-feed or mouleé and on this assumption, may be defined under Section 26 of the Adulteration Act.



Since bran, shorts, (middlings) and chop-feed are feeding stuffs, which may be sold without registration or guarantee, it is necessary that bran, shorts and chop-feed should be defined in terms of protein, fat and fibre, in order that the purchaser may be legally protected under Section 26 of the Adulteration of Food Act.

This was the position taken by me in June, 1908, when the Feeding Stuff's Act was in contemplation, and it is clearly stated in Bulletin No. 156. I was less assured as regards chop feeds, than regarding bran and shorts : (See Bulletin 156, p. 6), and am still in doubt as to the possibility of defining this term so as to be quite fair to the manufacturer, and at the same time to give efficient protection to the purchaser. I am convinced that manufacturers of high grade chop-feeds will find it to their advantage to state, on the package, the value of their product, in protein and fat, and fibre, just as in the case of mixed feeds, where such statement is required by law.

My justification for this contention will be found in a study of Table IV. It will be seen that, for 135 samples sold as chop-feeds, the extreme and mean values are —

	Maximum.	Minimum.	Mean.
Moisture .....	13·92	3·05	10·38
Fat .....	11·75	0·87	3·09
Proteids .....	16·19	6·63	10·70
Crude Fibre. ....	25·80	1·21	8·69
Ash .....	7·64	1·04	3·24
Carbohydrates.....	74·59	47·89	64·45

Considering alone the three components, proteids, fat and fibre, upon which the value of the food, as defined under the Act (Sec. 2, e) is judged, we find the variations so large as to make it difficult, if not impossible, to say what should constitute a typical chop feed. The proteids may apparently vary from 16·19 per cent to 6·63 per cent the fat from 11·75 per cent to 0·87 per cent the crude fibre from 1·21 per cent to 25·80 per cent.

Great variation was found in 28 samples of chop-feeds, reported in Bulletin 156 (p. 7). The mean results upon both inspections, may be presented thus :—

Mean results for chop-feed in—

	Protein.	Fat.	Fibre.
28 samples (Bull. 156).....	11·44	2·79	7·80
135 “ (Bull, 191).....	10·70	3·09	8·69

I would respectfully recommend that the following limits be made legal for chop feeds, under the condition named.

When chop-feed is sold or offered for sale without a registration number, and without a special guarantee from the manufacturer or agent, it must contain not less than 10 per cent of proteids, and not less than 2 per cent of fat, and not more than 10 per cent of crude fibre.

It is however strongly recommended to manufacturers of chop-feeds, i.e., feeds made from mixed or unmixed grains, ground or unground, that they register such feeds, and sell them under a definite guarantee.



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*Bran.*—In table II will be found the results of analysis of 148 samples purchased as Bran. The extreme and mean results of their examination are as follows:—

	Maximum	Minimum.	Mean.
Moisture .....	13·37	7·90	10·69
Fat .....	9·52	1·42	3·92
Proteids .....	17·56	11·81	14·67
Crude Fibre .....	13·20	3·96	9·26
Ash .....	7·16	3·16	5·53
Carbohydrates .....	64·25	50·06	56·01

The analysis of 27 samples of bran (reported in Bulletin 156) in June, 1908, gave very similar results.

The mean findings for protein, fat and fibre are as below:—

## MEAN RESULTS FOR BRAN.

	Protein.	Fat.	Fibre.
27 samples (Bull. 156) .....	14·74	3·48	8·69
148 " (Bull. 191) .....	14·67	3·92	9·26

The following limits for bran are recommended:—

When bran is offered for sale without a registration number, and without a special guarantee from the manufacturer or agent, it must contain not less than 14 per cent of proteids, and not less than 3 per cent of fat, and not more than 10 per cent of crude fibre.

## SHORTS OR MIDLINGS.

It has been found impracticable to distinguish between these terms; and for purposes of trade they appear to be synonymous, at least so far as stock feeds are concerned. In table III will be found the results of analysis of 258 samples purchased as shorts or middlings; chiefly under the former name, which is that more commonly used, so far as I can learn. The findings may be thus summarized:—

	Maximum.	Minimum.	Mean.
Moisture .....	13·56	6·45	10·54
Fat .....	6·88	0·95	4·04
Proteids .....	18·93	10·00	15·25
Crude Fibre .....	12·15	0·22	5·63
Ash .....	5·74	0·88	3·63
Carbohydrates .....	74·18	51·04	60·55

Bulletin 156 contains the results of analysis of 36 samples purchased as shorts or middlings. The mean values are as follows:—

## SHORTS OR MIDLINGS.

	Proteids.	Fat.	Fibre.
36 samples (Bull. 156) .....	16·37	4·00	7·75
258 " (Bull. 191) .....	15·25	4·04	5·63



1 GEORGE V., A. 1911

The following limits for shorts or middlings as stock feed are recommended :—

When shorts or middlings is offered for sale without a registration number, and without a special guarantee from the manufacturer or agent, it must contain not less than 15 per cent protein, nor less than 4 per cent of fat, nor more than 8 per cent of crude fibre.

Four samples, which do not fall into either class of feed stuff herein considered, were collected in mistake, and are not further referred to in this report.

For the guidance of those interested the Commercial Feeding Stuffs Act is printed as an appendix to the present report.

I beg to recommend the publication of this report as Bulletin 191.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*





## 8-9 EDWARD VII.

## CHAP. 15.

## An Act respecting Commercial Feeding Stuffs.

[Assented to 19th May, 1909.]

**H**IS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

**1.** This Act may be cited as *The Commercial Feeding Stuffs Act, 1909.* Short title.

**2.** In this Act, unless the context otherwise requires,—

<p>(a) “Minister” means the Minister of Inland Revenue;</p> <p>(b) “commercial feeding stuff,” “feeding stuff” and “feed” mean any article offered for sale for the feeding of domestic animals, and feeds claimed to possess medicinal as well as nutritive properties, excepting only hay and straw, roots, the whole seeds or the mixed or unmixed meals made directly from the entire grains of wheat, rye, barley, oats, Indian corn, buckwheat or flax seed; wet brewers’ grains; the bran or middlings from either wheat, rye, oats, peas or buckwheat sold separately and not mixed with other substances;</p> <p>(c) “registration number” means the specific number given by the Minister, under this Act, to each brand of commercial feeding stuff;</p> <p>(d) “agent” means any person whose name has been filed with the Minister as provided by section 4 of this Act;</p> <p>(e) “guaranteed analysis” means the valuation of a commercial feeding stuff by the manufacturer or agent, in terms of its minimum content of protein and fat, and its maximum content of fibre.</p>	<p>Definitions.</p> <p>“Minister.”</p> <p>“Commercial feeding stuff.”</p> <p>“Registration number.”</p> <p>“Agent.”</p> <p>“Guaranteed analysis.”</p>
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**3.** Commercial feeding stuffs shall be considered as of distinct brands when differing either in guaranteed composition, trade mark, name, or in any other characteristic method of marking. Distinct brands.



Name of foreign manufacturer's agent or representative in Canada to be filed with Minister.

4. Where the manufacturer of any commercial feeding stuff has his factory or chief place of business elsewhere than in Canada, he shall file with the Minister the name of a person resident in Canada and acceptable to the Minister, or a corporation having its head office in Canada, as the agent or representative of such manufacturer for all the purposes of this Act; and any notice to, or communication or dealing with, such agent or representative by the Minister shall be effectual for all the purposes of this Act.

Default of filing.

2. In default of such filing, the Minister may take any proceeding or action under this Act *ex parte*, and without any notice to, or communication with such person or corporation.

Registration number.

5. Every brand of commercial feeding stuff offered for sale in Canada shall bear a registration number, which shall be permanently assigned to the particular brand of feeding stuff for which it is issued. The number shall be granted by the Minister on the application of the manufacturer of such brand of feeding stuff, or his agent, and on payment of a fee of two dollars.

Fee.

Application for registration number.

6. Every application for a registration number shall be accompanied by a statement giving the following particulars:—

(a) Name of brand for which the registration number is asked, and trade mark, if any;

(b) Name and address of manufacturer;

(c) Name and address of the person applying for registration;

(d) Guaranteed analysis;

(e) The material of which the food is composed. This is required to be filed in the department, for the information of the Minister, not for publication.

Registration number, how affixed.

7. The registration number must be affixed by the manufacturer, or agent, in a plain and legible manner to every package of commercial feeding stuff sold or offered for sale, and shall constitute an identification of the brand. In addition to the registration number there must be legibly printed, on every package of feeding stuff sold, the statement set out in schedule A to this Act. This condition shall be held to be fulfilled if a printed tag bearing the registration number, and the statement required, is securely attached to the package.

Statement required.

Notice of change of composition and application for new number.

8. If a manufacturer elects to change the composition of any commercial feeding stuff for which a registration number has been granted, he shall notify the Minister to that effect, and shall apply for a new registration number to designate the new or altered feeding stuff; and the former registration number shall be cancelled, and shall not be reissued.



**9.** No manufacturer of commercial feeding stuff, and no agent of any such manufacturer, shall sell or offer for sale commercial feeding stuff, as defined by section 2 of this Act, unless he has a license under this Act authorizing the sale thereof. Annual license to sell.

**2.** Upon application of any such manufacturer or his agent, and upon payment of a fee of five dollars therefor, the Minister may grant a license authorizing the sale of such brands of commercial feeding stuff as are named in the license. Fee.

**3.** Such license shall be in such form as the Minister prescribes, and shall confer authority to sell during the calendar year in which the license is issued. Period of validity.

**4.** The Minister may renew any such license from year to year. Renewal.

**10.** Any purchaser of a registered commercial feeding stuff may obtain from the Minister an analysis of the feed as delivered to him, by making application for such analysis, accompanied by a sample of the feed of at least one pound weight, and taken in accordance with the directions given in schedule B to this Act; and on payment of a fee of one dollar. Purchaser of registered feeding stuff may obtain analysis. Fee.

**11.** The officers of Inland Revenue, the officers of Customs, the inspectors and deputy inspectors of weights and measures, and the inspectors of food, drugs and agricultural fertilizers acting under *The Adulteration Act* shall, when required so to do by any regulation made in that behalf by the Governor in Council or the Minister, act as inspectors of commercial feeding stuffs, and shall procure and submit for analysis samples of feeding stuffs offered for sale in Canada. Certain officers to act as inspectors. R.S., c. 133.

**12.** Every inspector of commercial feeding stuffs shall, whenever instructed by the Minister so to do, obtain for analysis a sample of every feeding stuff offered for sale in the district for which such inspector is appointed. Inspectors to procure samples for analysis.

**2.** Every sample so obtained shall be transmitted to the Minister for submission to the chief analyst for analysis; and the result of all such analyses shall be published annually by the Minister in such manner as he sees fit, together with such other information pertaining to commercial feeding stuffs as he deems it desirable should be published. Analysis and publication of results.

**13.** If any feeding stuff is imported for the personal use of the importer, and not for sale, this Act shall not apply thereto, but such importer may secure an analysis of the feed as delivered to him, on application to the Minister and on payment of a fee of five dollars. The sample submitted must be taken in accordance with the requirements of section 10 of this Act. Feeding stuff imported for personal use. Analysis.

**14.** This Act shall not apply to feeding stuffs which are manufactured to the order of the purchaser and are not in- Feeding stuff made to order, and not for sale



Analysis.

tended for sale, unless such feeding stuffs be actually sold by such purchaser; but such purchaser may secure an analysis of the feed as delivered to him, under the conditions stated in section 10 of this Act and on payment of a fee of five dollars.

Penalties for non-compliance with Act.

**15.** Every manufacturer or agent, or purchaser in cases provided for in the next preceding section, who sells or offers or exposes for sale any commercial feeding stuff in respect of which the provisions of this Act have not been complied with, or who sells or offers or exposes for sale any feeding stuff which does not contain the percentage of constituents mentioned in the manufacturer's statement or certificate accompanying such feeding stuff, shall be liable in each case to a penalty not exceeding fifty dollars for the first offence, and for each subsequent offence to a penalty not exceeding one hundred dollars and, in default of payment of such penalty, to imprisonment for thirty days; provided that a deficiency of one per cent of the protein, or fat, or an excess of two per cent of fibre claimed to be contained in the feeding stuff shall not be considered as evidence of fraudulent intent, if the total value of the feeding stuff in nutritive materials is substantially equivalent to the guaranteed statement made by the manufacturer or agent.

Proviso as to evidence of fraudulent intent.

Forgery of certificate, registration number, etc.  
Penalty.

**16.** Every person who forges, or utters or uses knowing it to be forged, any manufacturer's certificate, registration number, or certificate of analysis required under this Act, is guilty of an indictable offence, and is liable to imprisonment for a term not exceeding two years; with or without hard labour.

Unlawful use of certificate, tag or number.  
Penalty.

**17.** Every person who wilfully applies to any commercial feeding stuff a certificate, or tag, or registration number given in relation to any other package or lot of feeding stuff, and every person who sells an unregistered feeding stuff, and every person who lowers the nutritive value of a feeding stuff by mixing any other substances therewith, after the said feeding stuff has been placed on the market by the manufacturer or agent, shall be liable, on summary conviction, to a penalty not exceeding five hundred dollars and, in default of payment, to imprisonment for a term not exceeding twelve months.

False certificate.  
Penalty.

**18.** Every person who gives a false certificate in writing with respect to a commercial feeding stuff sold by him as a principal or agent shall be liable on summary conviction to a penalty not exceeding five hundred dollars, and in default of payment to imprisonment for a term not exceeding twelve months.

Application of fees and penalties.

**19.** All fees paid and penalties recovered under this Act shall form part of the Consolidated Revenue Fund of Canada.



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**20.** This Act shall come into force on the first day of January, <sup>Commence-</sup>  
one thousand nine hundred and ten. <sup>ment of Act.</sup>

## SCHEDULE A.

## STATEMENT TO BE ATTACHED TO PACKAGE.

1. (*Name of brand.*)
2. (*Registration number.*)
3. (*Name and address of manufacturer.*)
4. (*Analysis as guaranteed by the manufacturer, which shall show the percentage content of protein, fat and fibre.*)
5. Notice: Any purchaser may have an analysis made by the Department of Inland Revenue, on payment of one dollar. Samples must be taken in conformity with the regulations. For regulations address the Deputy Minister of Inland Revenue, Ottawa.

## SCHEDULE B.

INSTRUCTIONS FOR TAKING SAMPLES OF FEEDING STUFFS TO BE  
SUBMITTED FOR ANALYSIS IN ACCORDANCE WITH SECTION 10.

Samples of feeding stuffs submitted by a purchaser for analysis must be inclosed in glass jars or bottles, and properly sealed. The samples must be taken in the presence of the vendor or of his representative.

*Process of Sampling.*

In lots of five tons, or less, portions shall be drawn from each separate package, and from at least ten packages; or if less than ten packages are present, all shall be sampled. In lots of over five tons, at least ten per cent of the packages shall be sampled. The portions so taken shall be thoroughly mixed in the presence of the parties interested, and from this mixture the sample sent to the Minister is to be taken, and must bear the signature of vendor and purchaser; and at the same time a duplicate sample is to be left with the party whose goods are inspected, subject to the call of the manufacturer or agent.



TABLE I—STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.		Cost.		Inspector's Report. (Is not an expression of Opinion).	RESULTS OF ANALYSIS.						Number of Sample.		
			Name and Address of Vendor.	Quantity.	Cents.	Moisture.		Fat.	Protein.	Ash.	Differ.					
												p. c.	p. c.		p. c.	p. c.
May	7	Stock feeds	33841 F. A. Shaw, Halifax, N.S.	5 lbs.	5	11.14	10.59	American Cereal Co., Chatham, Ont.		10.59	4.53	11.14	9.08	5.86	55.50	33841
"	10	"	33842 E. M. Walker, Dartmouth, N.S.	5 "	10	16.19	9.05	Tillson Milling Co., Tillsonburg, Ont.		9.05	3.50	16.19	10.55	4.16	56.55	33842
"	12	"	33843 Embree & Trenholm, Amherst, N.S.	5 "	5	14.25	10.93	Western Canada Flour Mills Co., Ontario.		10.93	3.12	14.25	11.05	3.92	56.73	33843
"	15	"	33844 J. Ernst & Son, Mahone, N.S.	5 "	5	16.25	10.78	Saskatchewan Flour Mills Co., Moosejaw, Sask.		10.78	3.55	16.25	9.86	5.76	53.80	33844
"	17	"	33845 Walter Moore, Kentville, N.S.	5 "	5	15.69	9.40	S. L. Cross, Kentville, N.S.		9.40	3.90	15.69	10.00	5.46	55.55	33845
"	17	"	33846 S. L. Cross, Kentville, N.S.	5 "	5	14.19	10.90	Ogilvie Flour Mills Co., Montreal.		10.90	3.60	14.19	9.38	5.60	56.33	33846
"	18	"	33847 T. L. Harvey, Wolfville, N.S.	5 "	5	14.88	9.60	Unknown		9.60	4.25	14.88	11.25	5.16	54.86	33847
"	20	"	33848 Frank Fraser, Halifax, N.S.	5 "	5	15.50	11.61	"		11.61	2.75	15.50	8.49	5.31	56.31	33848
"	20	"	33849 Jas. Hogan, Halifax, N.S.	5 "	5	13.81	10.80	Gunn & Co., Halifax, N.S.		10.80	2.36	13.81	10.84	5.28	56.51	33849
"	20	"	33850 J. D. Stewart, Halifax, N.S.	5 "	5	14.88	11.05	Wm. Muir & Son, Halifax, N.S.		11.05	4.80	14.88	9.38	5.64	54.24	33850
"	7	"	33851 F. A. Shaw, Halifax, N.S.	5 "	10	14.94	10.35	T. H. Taylor, Chatham, Ont.		10.35	3.98	14.94	5.87	4.40	60.46	33851
"	7	"	33852 Alex. Adams & Co., Halifax, N.S.	5 "	10	16.00	11.00	Ogilvie Milling Co., Montreal.		11.00	3.39	16.00	7.20	3.90	58.51	33852
"	7	"	33853 L. B. Shaffner & Co., Halifax, N.S.	5 "	"	11.19	11.15	Neil McCall, Forrest, Ont.		11.15	3.02	11.19	6.43	4.40	60.74	33853
"	10	"	33854 B. O. Bishop, Dartmouth, N.S.	5 "	10	15.06	10.47	Nova Scotia Milling Co., Dartmouth, N.S.		10.47	4.03	15.06	6.37	4.36	59.71	33854
"	10	"	33855 S. A. Thomson, Dartmouth, N.S.	5 "	8	14.38	11.17	Goldie Milling Co., Ont.		11.17	4.46	14.38	5.47	4.00	60.52	33855
"	11	"	33856 J. S. Cashen, Halifax, N.S.	5 "	10	15.12	10.78	Wm. Muir & Son, Halifax, N.S.		10.78	4.40	15.12	6.04	4.74	58.92	33856



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"	14	"	33857	R. Feindel, N.S.	Bridgewater, N.S.	5	"	5	Unknown	"	"	11.02	4 31	15 56	5 36	4 20	59 55	33857
"	14	"	33858	H. C. Barnaby, N.S.	Bridgewater, N.S.	5	"	5	Brook Wool Milling Co., Brantford, Ont.	"	"	10.56	3 58	13 38	4 38	3 50	61 60	33858
"	14	"	33859	R. Dawson & Son, N.S.	water, N.S.	5	"	"	"	"	"	10.40	3 06	15 31	7 01	4 28	59 31	33859
"	20	"	33860	Wentzells Ltd., N.S.	Halifax, N.S.	5	"	"	Saskatchewan Flour Mills Co., Moosejaw, Sask.	"	"	11.01	3 71	14 00	9 72	5 90	57 97	33860
"	7	"	33861	S. C. Thompson, N.S.	Halifax, N.S.	5	"	10	Unknown	"	Shorts	10.80	4 75	16 31	7 19	4 86	56 00	33861
"	10	"	33862	S. Mott, N.S.	Dartmouth, N.S.	5	"	10	Nova Scotia Milling Co., Dartmouth, N.S.	"	"	10.73	4 39	14 88	5 47	4 10	60 43	33862
"	10	"	33863	Nova Scotia Milling Co., N.S.	Dartmouth, N.S.	5	"	10	G. Carter Son & Co., St. Marys, Ont.	"	"	11.25	4 07	14 91	6 35	3 92	58 87	33863
"	10	"	33864	John Davison & Son, N.S.	Halifax, N.S.	5 lbs	"	5	Nova Scotia Milling Co., Dartmouth, N.S.	"	Shorts	10.98	5 10	15 81	7 37	4 10	56 61	33864
"	11	"	33865	Gunn & Co., N.S.	Halifax, N.S.	5	"	"	McLeod Milling Co., Stratford, Ont.	"	"	11.37	4 82	14 88	5 80	3 98	59 15	33865
"	11	"	33866	E. J. Penton, N.S.	Halifax, N.S.	5	"	10	Ogilvie Milling Co., Montreal	"	"	11.15	4 82	14 06	7 45	4 88	57 61	33866
"	15	"	33867	C. N. Mader, N.S.	Halifax, N.S.	5	"	"	DeLong & Seaman, Boston	"	"	10.02	5 16	16 25	6 11	5 50	50 96	33867
"	18	"	33868	R. E. Harris & Son, N.S.	Halifax, N.S.	5	"	10	Woodburn Milling Co., Glenora, Ont.	"	"	10.36	3 84	14 88	5 95	4 48	60 49	33868
"	20	"	33869	Frank Fraser, N.S.	Halifax, N.S.	5	"	10	Unknown	"	"	10.37	2 96	14 44	7 92	4 80	59 51	33869
"	20	"	33870	E. Donahoe & Son, N.S.	Halifax, N.S.	5	"	10	Ogilvie Flour Mills Co., Montreal	"	"	9.85	4 35	16 88	11 90	4 74	52 28	33870
"	7	"	33871	L. B. Shaffner & Co., N.S.	Halifax, N.S.	5	"	10	Quaker Oats Co., Peterboro', Ont.	"	"	10.04	2 15	8 06	13 00	3 60	63 15	33871
"	10	"	33872	F. D. Knowles & Co., N.S.	Halifax, N.S.	5	"	10	Ogilvie Milling Co., Montreal	"	"	10.34	3 61	16 00	13 03	3 22	59 80	33872
"	11	"	33873	Gunn & Co., N.S.	Halifax, N.S.	5	"	"	Vendors	"	"	10.57	2 93	10 12	6 55	2 71	67 09	33873
"	12	"	33874	Moffatt Bros., N.S.	Amherst, N.S.	5	"	13	R. W. Oliver, Montreal	"	"	10.85	3 17	10 88	10 76	2 70	61 61	33874
"	12	"	33875	F. R. Angus, N.S.	Amherst, N.S.	5	"	10	Quaker Oats Co., Peterboro', Ont.	"	"	10.00	2 10	8 60	10 15	2 28	66 18	33875
"	13	"	33876	J. A. Hanson, N.S.	Truro, N.S.	5	"	10	Flavelle Milling Co., Lindsay, Ont.	"	"	8.50	2 65	8 56	12 90	3 74	63 65	33876
"	13	"	33877	W. C. Sumner, N.S.	"	"	"	"	Vendors	"	"	9.35	3 45	9 38	8 60	2 40	66 82	33877
"	14	"	33878	H. S. Hall, N.S.	Bridgewater, N.S.	5	"	5	Tilson, Tillsonburg, Ont.	"	"	10.02	4 08	10 75	7 19	3 62	61 01	33878
"	17	"	33879	W. A. Smith, N.S.	Kentville, N.S.	5	"	5	Unknown	"	"	10.35	2 90	11 81	11 15	3 91	56 55	33879
"	17	"	33880	S. L. Gross, N.S.	"	5	"	5	Ogilvie Flour Mills Co., Montreal	"	"	10.41	2 70	15 38	7 22	4 31	59 95	33880



TABLE I—STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.		Cost.	Quantity.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion).	RESULTS OF ANALYSIS.						Number of Sample.
			Moisture.	Fat (Indirect).					Proteids.	(Crude Fibre).	Ash.	Difference.			
DISTRICT OF PRINCE EDWARD ISLAND THEO. MOORE, INSPECTOR.															
1909.									p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
May	Stock Feeds	38521	Auld Bros., Charlottetown.	5 lbs.	....	Wolverton Milling Co., Brantford, Ont.	Wolverton, Ont.	.....	10.39	3.84	14.06	9.64	6.00	56.07	38521
"	"	38522	Arthur Edmonds, Charlotte town.	5 "	10	Carvell Bros., Charlotte town.	Charlotte town.	.....	10.74	3.80	15.12	9.74	5.84	54.76	38522
"	"	38523	R. E. Mutch, Charlotte town.	5 "	10	Ogilvie Milling Co., Montreal.	Montreal.	.....	11.59	1.86	14.00	8.17	5.16	59.22	38523
"	"	38524	A. Horn & Co., Charlotte town.	5 "	8	Goldie Milling Co., Galt, Ont.	Galt, Ont.	.....	10.61	3.24	13.56	8.70	6.24	57.65	38524
"	"	38525	Sanderson & Co., Charlotte town.	5 "	8	Wolverton Milling Co., Brantford, Ont.	Wolverton, Ont.	.....	10.60	3.80	14.28	10.06	6.20	55.06	38525
"	"	38526	W. W. Walker, Charlotte town.	5 "	8	N. Rattenbury, Charlotte town.	Brantford, Ont.	.....	10.86	4.33	15.56	8.29	5.36	55.60	38526
"	"	38527	Mathew & McLean, Souris.	5 "	10	Pictou Flour Mills, Pictou, N.S.	Pictou, N.S.	.....	11.30	3.25	12.69	11.35	5.84	55.57	38527
"	"	38528	A. L. McDonald, Souris.	5 "	12	Campbell Milling Co., Toronto.	Toronto.	.....	11.58	1.12	13.56	9.46	5.94	58.04	38528
"	"	38529	J. B. Andrew, Charlotte town.	5 "	10	Vendor	Vendor	.....	12.59	3.69	14.25	6.77	5.00	57.70	38529
"	"	38530	E. Gates, Charlotte town.	5 "	10	"	"	.....	12.91	1.18	14.50	5.88	5.10	57.43	38530
"	"	38531	Auld Bros., Charlottetown.	5 "	10	Wolverton Milling Co., Brantford, Ont.	Brantford, Ont.	.....	11.26	1.88	15.12	5.26	4.30	59.18	38531
"	"	38532	R. E. Mutch, Charlottetown.	5 "	10	Jno. Campbell & Co., Ltd., St. Thomas, Ont.	St. Thomas, Ont.	.....	12.01	4.52	15.12	1.85	3.90	59.60	38532
"	"	38533	A. Horn & Co., Charlotte town.	5 "	8	Campbell Milling Co., Toronto.	Toronto.	.....	10.86	4.13	14.50	4.85	4.10	51.56	38533
"	"	38534	Sanderson & Co., Charlotte town.	5 "	8	Wolverton Milling Co., Brantford, Ont.	Brantford, Ont.	.....	10.62	4.41	15.68	5.65	4.00	61.24	38534
"	"	38535	W. W. Walker, Charlotte town.	5 "	13	Unknown	Unknown	.....	10.50	3.00	11.63	4.35	1.04	69.48	38535
"	"	38536	W. D. Currie, Souris.	5 "	10	Campbell Milling Co., Toronto.	Toronto.	.....	10.68	5.81	16.06	5.13	4.64	57.68	38536



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"	10	"	"	38537	J. J. Hughes, Souris.....	5	"	8	J. W. Smith, Pictou, N.S.,	"	"	10	42	1	41	16	44	1	88	3	92	59	93	38537
"	11	"	"	38538	Mathew and McLean, Souris	5	"	10	Pictou Flour Mills, Pictou, N.S.	"	"	11	55	1	06	14	06	1	06	1	90	68	03	38538
"	11	"	"	38539	J. B. Andrew, Charlotte town, Royalty.	5	"	10	Vendor .....	"	"	13	09	0	30	11	63	0	30	0	96	72	22	28539
"	11	"	"	38540	F. Gates, Charlottetown, Royalty.	5	"	10	" .....	"	"	13	27	1	37	10	00	1	37	1	70	72	33	38540

DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON, INSPECTOR.																								
April 27	Stock feeds.	29954	James Collins, St. John, 5 lbs.	15	De Witt Bros., Fairville, St. John, N. B.	"	"	10	30	3	55	14	50	8	17	5	34	58	14	29954				
May 1	"	29955	L. C. Prime Co., Ltd., St. John, N. B.	10	Ogilvie Milling Co., Ltd., Canada	"	"	7	90	4	40	13	87	12	15	5	30	56	38	29955				
"	12	29956	J. B. Robinson, St. Stephen, 5	15	Tillson's, Tillsonburg, Ont.	"	"	11	15	5	30	13	31	8	79	5	80	55	65	29956				
June 2	"	29957	W. B. McKay & Co., Sussex, 5	10	Lake of the Woods Milling Co., Keewatin.	"	"	10	61	4	52	15	31	10	55	5	68	53	33	29957				
"	3	29958	James Doyle & Son, Moncton, 5	10	Flavelle Milling Co., Lindsay Ont.	"	"	12	29	4	03	14	50	9	80	5	20	54	18	29958				
"	3	29959	Toombs & Son, Moncton, 5	15	McLeod Milling Co., Stratford, Ont.	"	"	11	79	3	08	13	75	8	68	5	60	57	10	29959				
"	4	29960	J. B. Snowball Co., Ltd., 5	10	Wolverton Milling Co., Wolverton, Ont.	"	"	13	37	3	90	13	81	9	08	5	70	54	14	29960				
"	4	29961	E. A. Strang, Chatham, 5	10	Tavistock Milling Co., Ltd., Tavistock, Ont.	"	"	12	89	2	90	12	31	9	90	5	90	56	10	29961				
"	5	29962	A. C. Branch, Bathurst, 5	15	The Tillson Co., Ltd., Tillsonburg, Ont.	"	"	11	80	3	03	13	87	10	43	6	10	51	77	29962				
"	5	29963	W. J. Kent Co., Ltd., 5	10	Quaker Oats Co., Peterboro, Ont.	"	"	12	16	3	85	14	87	8	47	5	64	55	01	29963				
April 27	"	29964	W. J. Alexander, St. John, 5	15	A. C. Smith & Co., St. John, N.B.	"	"	9	50	2	90	16	63	5	50	3	44	61	93	29964				
"	28	29965	C. H. Peters Sons, Ltd., St. John, N.B.	15	Lake of the Woods Milling Co., Keewatin, Ont.	"	"	6	45	3	75	16	38	7	95	3	94	61	53	29965				
"	7	29966	A. C. Smith & Co., St. John, 5	15	Ogilvie Flour Mills, Montreal.	"	"	9	00	5	25	15	31	8	40	1	04	58	00	29966				
"	12	29967	J. B. Robinson Estate, St. Stephen, N.B.	15	A. J. Feed Co., Ltd., St. Stephen, N.B.	"	"	11	19	4	41	15	68	8	55	3	00	57	17	29967				
"	12	29968	P. F. McKenna, St. Stephen, 5	15	" .....	"	"	10	13	5	73	15	06	8	66	4	44	55	98	29968				
"	13	29969	F. H. Everett, Fredericton, 5	15	J. Stenmiller, Walkerton, Ont.	"	"	10	75	4	96	15	31	8	12	5	08	55	78	29969				
"	14	29970	L. C. Prime Co., Ltd., 5	15	The Campbell Milling Co., Ltd., West Toronto, Ont.	"	"	11	45	4	39	14	94	1	56	3	62	51	04	29970				
"	17	29971	The Perth Milling Co., Ltd., 5	15	Vendors .....	"	"	11	80	3	79	15	81	8	75	4	50	55	35	29971				
"	17	29972	G. O. DeWitt, Andover, N.B., 5	10	DeWitt Bros., St. John, N.B.	"	"	11	02	5	55	15	93	8	02	4	80	54	68	29972				



1 GEORGE V., A. 1911

TABLE I STOCK FEEDS.

Date of Collection	No. of Sample	Nature of Sample	Name and Address of Vendor.	Quantity.	Cost.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSES.										No. of Sample
								Moisture	Fat (Ether Extract)	Protein	Crude Fibre	Ash	Ether Extract	RESULTS OF ANALYSES.				
														p. c.	p. c.	p. c.	p. c.	
DISTRICT OF NEW BRUNSWICK J. C. FERGUSON, INSPECTOR.—Continued.																		
June 3	3	Stock feeds.	William H. Edgett, Moncton, N.B.	5 lbs.	10	Ogilvie Milling Co., Canada	Shorts.	11 15	3 87	16 00	7 81	4 80	56 37	29973				
April 27	"	"	William Dunlop & Sons, St. John, N.B.	"	15	Goddie Milling Co., Canada	Middlings	11 08	3 55	11 62	4 64	4 26	61 85	29974				
" 27	"	"	E. Walsh & Co., St. John, N.B.	"	15	A. C. Smith & Co., St. John, N.B.	"	10 10	4 35	16 69	3 55	3 26	62 05	29975				
May 12	"	"	McAllister Bros., St. Stephen, N.B.	"	15	Campbell Milling Co., Toronto Junction, Ont.	"	11 45	4 38	15 93	6 63	4 54	57 07	29976				
" 13	"	"	John Gibson & Son, Fredericton, N.B.	"	15	Seaforth Milling Co., Seaforth, Ont.	"	11 17	4 70	14 62	5 51	3 74	60 26	29977				
" 14	"	"	J. M. Frupp, Woodstock, N.B.	"	15	Medunakeag Roller Mills, Woodstock, N.B.	"	12 14	3 10	13 81	3 03	2 54	65 38	29978				
June 2	"	"	Sussex Mercantile Co., Ltd., Sussex, N.B.	"	10	Lake of the Woods Milling Co., Ltd.	"	10 69	5 14	16 81	6 43	3 80	57 13	29979				
" 3	"	"	H. J. Leaman, Moncton, N.B.	"	15	Western Canada Flour Mills, Ltd., Canada.	"	10 67	4 93	16 87	5 36	4 04	58 13	29980				
" 3	"	"	William Murray, Moncton, N.B.	"	10	Goddie Milling Co., Ltd., Canada.	"	11 55	4 68	14 37	5 63	4 04	59 73	29981				
" 4	"	"	The Stothart Mercantile Co., Ltd., Newcastle, N.B.	"	10	The F. H. Taylor Co., Ltd., Chatham, Ont.	"	13 50	4 11	14 81	5 83	4 08	57 67	29982				
" 4	"	"	Baird & Peters, Newcastle, N.B.	"	20	The Ogilvie Milling Co., Ltd., Montreal.	"	12 00	5 75	17 00	5 13	3 90	56 22	29983				
April 20	"	"	Ira B. Kierstead, St. John, N.B.	"	15	A. C. Smith & Co., St. John, N.B.	Chop feed (Moulée).	9 00	1 80	8 68	7 85	3 60	69 07	29984				
May 3	"	"	N. S. Springer, St. John, N.B.	"	15	Woodburn Milling Co., Glenora, Ont.	"	10 00	3 65	10 00	7 90	3 24	65 81	29985				
" 3	"	"	J. Harrison & Co., St. John, N.B.	"	15	Ogilvie Milling Co., Montreal.	"	9 00	4 22	12 62	4 60	1 94	67 62	29986				
" 3	"	"	P. Nase & Son, St. John, N.B.	"	15	Quaker Oats Co., Peterboro, Ont.	"	10 75	3 45	8 25	6 35	2 44	68 76	29987				
" 12	"	"	T. R. Speedy, St. Stephen, N.B.	"	15	R. W. Oliver Milling Co., Montreal.	"	10 04	0 90	11 37	25 80	4 00	47 89	29988				



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"	13	"	"	29989	A. H. Vanwait, Fredericton, N. B.	5 "	15	Ogilvies, Montreal	"	11.26	4 56	11 31	3 87	4 08	64.92	29989
"	13	"	"	29990	John Gibson & Son, Fredericton, N. B.	5 "	15	The Flavelle Milling Co., Lindsay, Ont.	"	9.75	3 10	8.25	10 65	4.08	64.17	29990
"	14	"	"	29991	L. C. Prime Co., Woodstock, N. B.	5 "	15	Campbell Milling Co., Ltd., West Toronto, Ont.	"	11.97	4 10	12.25	6.98	3 64	61.06	29991
"	17	"	"	29992	The Perth Milling Co., Perth, N. B.	5 "	15	Vendors	"	12.21	3.10	9 69	13 80	4.50	56.70	29992
June	2	"	"	29993	Sussex Mercantile Co., Sussex, N. B.	5 "	16	Flavelle Milling Co., Lindsay, Ont.	"	12.05	1.72	10 68	8.15	4.46	62.94	29993
"	2	"	"	30000	"	5 "	10	The Wallaceburg Sugar Co., Ltd., Wallaceburg, Ont.	Natural molasses Stock food.	18.17	0.41	9 12	10.90	5.40	56.00	30000

## DISTRICT OF QUEBEC E. BELAND, INSPECTOR.

April	26	Stock feeds...	36732	Julien & Vezina, 1230 St. Valier, Quebec.	Rue 5 lbs.	7	Boissevain, Manitoba	Bran.	10.94	3 78	15 94	7 47	4 68	57.19	36732
"	26	"	36733	N. Bertrand, 685 Valier, Quebec.	Rue St. 5 "	8	Ogilvies, Montreal	"	10.57	4 96	15 13	8 65	5 64	55.05	36733
"	26	"	36734	P. Renaud, 597 Valier, Quebec.	Rue St. 5 "	8	Kerouack & Fils, Quebec.	"	10.89	6 06	15 25	7 97	5 74	54.09	36734
"	26	"	36735	A. A. Cantin, 555 Valier, Quebec.	Rue St. 5 "	15	Unknown.	"	10.81	4 07	14.81	8.96	5.60	55.75	36735
"	27	"	36736	O. Bacon, 28 Rue Quebec.	Hermine, 5 "	10	P. T. Busere, Quebec.	"	10.20	4.00	14 63	7 70	5 88	57.59	36736
"	27	"	36737	T. Pepin, 132 Rue Quebec.	Massue, 5 "	10	Kerouack & fils, Quebec.	"	9.25	3 90	14 88	8.45	6.00	57.52	36737
"	27	"	36738	L. Dupuis, 23 Rue Quebec.	Dollard, 4 "	5	N. Bertrand, Quebec.	"	10.81	2 96	14 62	8.96	6 16	56.49	36738
"	27	"	36739	A. Patry, 922 Rue Quebec.	St. Valier, 4 "	10	W. Carrier & fils, Quebec.	"	10.91	4 42	15.25	8.56	5.80	55.06	36739
"	27	"	36740	G. E. Hamel, 914 Valier, Quebec.	Rue St. 4 "	10	Unknown.	"	10.74	4 37	14.81	9 42	5 54	55.12	36740
"	27	"	36741	P. E. Kirvack, 1105 Valier, Quebec.	Rue St. 4 "	10	"	"	10.61	4 15	15 75	6 23	4 24	59.02	36741
"	26	"	36742	Julien & Vezina, 1230 St. Valier, Quebec.	Rue 4 "	10	Boissevain, Manitoba	Shorts...	10.00	2 30	15.06	5 80	3 00	63.84	36742
"	26	"	36743	N. Bertrand, 685 Valier, Quebec.	Rue St. 5 lbs	9	William Scott, Montreal	"	9.91	3 74	14 94	9 24	4 84	57.33	36743
"	26	"	36744	P. Renaud, 597 Valier, Quebec.	Rue St. 5 "	10	Unknown	"	10.45	4.10	14 94	9 85	2 70	57.96	36744
"	26	"	36745	A. A. Cantin, 555 Valier, Quebec.	Rue St. 5 "	15	"	"	11.07	2.42	14 38	2.48	2 20	67.45	36745
"	27	"	36746	O. Bacon, 28 Rue Quebec.	Hermine, 5 "	10	P. T. Busiere, Quebec	"	10.82	2 77	14 38	3 63	2 91	65.46	36746



TABLE I—STOCK FEEDS.

Date of Certificate	Number of Sample	Nature of Sample	Name and Address of Vendor		Quantity (Cents)	Cost	Name and Address of Manufacturer or Furnisher as given by the Vendor	Inspector's Report (Is not an expression of Opinion.)	Results of Analysis					Number of Sample	
			Moisture	Fat (Inch. Feet)					Proteids	Crude Fibre	Ash	Difference			
DISTRICT OF QUEBEC—Continued.															
1909.									p. c.	p. c.	p. c.	p. c.	p. c.		
April 27	Stock Feeds.		36747	T. Pepin, 132 Rue Massue, 5 lbs., Quebec.	10	10	W. Carrier & fils, Quebec.	Shorts	...	10.93	4.37	15.69	9.62	3.36	36747
"	"	"	36748	L. Dupuis, 23 Rue Dollard, 5 "	10	10	N. Bertrand, Quebec.	"	.....	10.50	2.15	15.06	5.50	2.50	36748
"	"	"	36749	P. S. Kironuck, 1105 Rue St. Valier, Quebec.	10	10	Unknown	"	.....	11.02	4.60	17.06	5.52	1.14	36749
"	"	"	36750	T. U. Robitaille, 1283 Rue St. Valier, Quebec.	10	10	"	"	.....	9.95	2.85	14.50	6.35	4.24	36750
"	"	"	36751	T. B. Renaud & Co., Quebec.	10	10	"	"	.....	10.86	3.61	15.25	5.19	3.22	36751
"	"	"	36752	N. Bertrand, 685 Rue St. Valier, Quebec.	10	10	William Scott, Montreal.	Middlings	.....	10.50	2.00	13.56	5.10	3.30	36752
"	"	"	36753	P. Renaud, 497 Rue St. Valier, Quebec.	10	10	Unknown	"	.....	10.40	3.65	13.09	10.32	3.94	36753
"	"	"	36754	A. Patry, 922 Rue St. Valier, Quebec.	10	10	W. Carrier & fils, Quebec.	"	.....	10.36	4.59	15.68	4.14	3.58	36754
"	"	"	36755	M. Babin, 105 Rue St. Roch, Quebec.	10	10	E. M. Lennon & Co., Quebec.	"	.....	11.84	4.21	16.62	5.67	3.80	36755
"	"	"	36756	T. B. Renaud & Co., Quebec.	10	10	Unknown	"	.....	10.00	2.25	15.31	4.95	2.20	36756
"	"	"	36757	G. Tanguay, Quebec.	10	10	Howards Co., Montreal.	"	.....	10.84	3.33	15.31	5.32	4.68	36757
"	"	"	36758	W. Carrier & fils, Quebec.	10	10	Lake of the Woods, Montreal.	"	.....	11.08	3.49	16.44	6.02	3.80	36758
"	"	"	36759	E. M. Lennon, Quebec.	10	10	Carnduff, Saskatchewan.	"	.....	10.64	3.62	14.44	1.44	2.10	36759
"	"	"	36760	D. E. Drolet, Quebec.	10	10	Lake of the Woods.	"	.....	10.10	4.35	16.18	12.15	3.94	36760
"	"	"	36761	C. A. Paradis, Quebec.	10	10	Ogilvies, Montreal.	"	.....	10.55	5.18	16.56	5.63	1.08	36761
"	"	"	36762	Julien & Vezeau, 1230 Rue St. Valier, Quebec.	10	10	Vendors	Chop feed.	.....	8.00	3.05	9.44	13.05	3.44	36762



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"	26	36763	N. Bertrand, 282 Rue St. Valier, Quebec.	10	H. C. Bossé, Quebec.	11 07	3 22	11 69	12 85	4 40	56 77	36763
"	26	36764	A. A. Cantin, 555 Rue St. Valier, Quebec.	15	Unknown	10 38	2 79	10 06	10 56	3 14	63 07	36764
"	27	36765	O. Bacon, 28 Rue Hermine, Quebec.	10	T. E. Robitaille, Quebec.	11 85	1 53	7 19	17 06	3 92	58 45	36765
"	27	36766	T. Pepin, 138 Rue Massue, Quebec.	13	Vendor	10 05	3 55	10 75	12 40	3 00	60 25	36766
"	27	36767	L. Dupuis, 23 Rue Dollard, Quebec.	10	N. Bertrand, Quebec.	10 50	1 60	12 31	8 00	3 60	63 99	36767
"	27	36768	A. Patry, 922 Rue St. Valier, Quebec.	10	E. M. Lannon & Co., Quebec.	10 86	4 11	11 19	9 47	3 50	61 05	36768
"	27	36769	B. E. Kirouack, 1105 Rue St. Valier, Quebec.	10	Unknown	9 55	2 00	12 19	9 00	3 50	63 76	36769
"	27	36770	P. Plante, 54 Rue St. Lac, Quebec.	8	"	10 96	3 12	13 19	7 64	4 50	60 59	36770
"	27	36771	T. U. Robitaille, 1283 Rue St. Valier, Quebec.	10	E. U. Robitaille, Quebec.	10 87	4 33	10 06	12 75	4 20	57 79	36771

DISTRICT OF ST. HYACINTHE, J. C. ROULEAU, INSPECTOR.

April	26	Stock feeds.	38801	J. Dauphinais, Vill. et St. 3 lbs. 5	Ogilvie Milling Co., Mon-Bran-treal.	10 33	3 92	14 81	9 88	5 88	55 18	38801
"	27	"	38802	M. Bousquet, St. Hyacinthe 5	James Cumming, Lynn, Ont	9 66	3 46	14 81	8 73	5 44	57 90	38802
"	27	"	38803	J. M. Palardy, St. Hyacinthe 5	Lake of the Woods Milling Co., Montreal.	10 94	5 54	15 56	9 40	5 84	52 72	38803
May	5	"	38804	Biron & Blouin, E. Sherbrooke 5	Unknown	10 40	3 70	14 37	11 90	4 60	55 03	38804
"	18	"	38805	A. S. Lamoureux, Contrecoeur 5	Ogilvies	12 32	4 10	15 75	7 93	5 28	54 62	38805
"	24	"	38806	E. Chaput, Egypte de Mill. 5	Wm. Scott & Co., Ottawa.	12 23	3 68	15 81	8 82	7 16	52 30	38806
"	24	"	38807	R. Lapierre, St. Dominique 5	J. M. Palardy, St. Hyacinthe.	10 24	6 93	15 31	9 19	5 40	52 93	38807
"	24	"	38808	Fagnan & Lebrun, St. Dominique 5	C. Racicot, (The Maple Leaf Flour Mills Co.) St. Hyacinthe.	10 20	5 51	15 56	8 47	5 44	54 82	38808
"	26	"	38809	F. Bachand, Waterloo 5	Wm. Scott & Co., Ottawa.	11 09	3 75	12 69	12 67	5 10	54 70	38809
"	27	"	38810	D. Gervais, Iberville 5	Ogilvies	13 09	3 06	14 62	8 75	5 18	55 30	38810
"	27	"	38812	M. Bousquet, St. Hyacinthe 5	James Cumming, Lynn, Ont.	9 90	2 70	15 38	5 90	4 60	61 52	38812
"	27	"	38813	J. M. Palardy, St. Hyacinthe 5	Lake of the Woods Milling Co., Montreal.	10 88	4 16	15 75	6 81	4 36	58 04	38813
"	28	"	38814	Marin & Langelier, Upton 5	Ogilvie Milling Co., Mon-treal.	10 17	3 66	15 50	7 75	4 26	58 66	38814



TABLE I STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address		Cost.	Name and Address		Inspector's Report. (Is not an expression of opinion.)	Results on Analysis.						Number of Sample.
			of Vendor.	of Vendor.		Quantity.	(Cents.)		of Manufacturer or Furnisher as given by the Vendor.	of Manufacturer or Furnisher as given by the Vendor.	Moisture.	Total Protein.	Crude Fat.	Crude Fiber.	
DISTRICT OF ST. HYACINTHE—Concluded.															
1907.									P. C.	P. C.	P. C.	P. C.	P. C.	P. C.	
April 29	Stock feeds.	38815	L. O. Pepin et fils, Artha-5 lbs.	8	Lake of the Woods, ..	Shorts, ..			9 10	4 30	15 75	6 30	4 28	60 27	38815
" 29	"	38816	C. O. Robarge, Victoria-5 "	8	Winkler Milling Co., Man- toba.	"			11 04	3 34	15 69	2 70	2 80	64 43	38816
May 5	"	38817	Biron & Blouin, E. Sher-5 "	8	Denault Grain & Prov. Co., Sherbrooke.	"			9 82	4 75	16 56	7 65	4 39	76 92	38817
" 18	"	38818	A. Lamoureux, Contrecoeur-5 "	10	Ogilvie, .....	"			11 24	4 20	15 68	6 50	4 40	57 98	38818
" 18	"	38819	Lapierre & freres, Pierre-5 "	10	Lake of the Woods, .....	"			10 76	4 98	16 06	5 20	3 52	59 48	38819
" 19	"	38820	J. B. Gagne & fils, Sorel...5 "	8	E. A. Schmidt, Board of Trade Bldgs, Montreal.	"			11 60	5 27	16 56	5 44	4 04	57 00	38820
" 24	"	38821	A. Grise, St. Pie Bagot...5 "	10	Lake of the Woods, .....	"			10 49	5 22	15 93	6 02	3 40	58 44	38821
April 26	"	38823	F. Lafontaine, Bebel.....5 "	8	Ogilvie Milling Co., Mont real.	Middlings			10 00	4 21	16 18	8 33	4 08	57 20	38823
" 25	"	38824	R. Tetrault, Roxton Falls 1½ "	...	Canadian Milling Agency, Victoriaville.	"			9 50	3 00	13 13	3 85	3 48	67 04	38824
" 25	"	38825	" " " " 1½ "	...	" " " "	"			8 35	3 25	14 81	5 75	4 40	53 44	38825
" 25	"	38826	Guerin & Archambault, 5 "	10	The Flavell Milling Co., Lindsay, Ont.	"			10 40	3 10	16 13	8 25	3 46	58 66	38826
" 25	"	38827	E. J. Gauvin, Actonvale 15 "	10	Lake of the Woods Milling Co., Montreal.	"			10 61	3 66	16 25	5 70	3 60	60 18	38827
May 11	"	38828	N. Forcier, St. Guillaume, 5 "	10	" " " "	"			9 99	3 43	15 31	4 70	3 74	62 83	38828
" 19	"	38829	J. B. Gagne & fils, Sorel. 5 "	8	N. Lacoste, Montreal	"			11 86	3 80	15 96	6 10	3 70	59 48	38829
" 26	"	38830	Berthiaume Lanane, Farm 5 "	...	Ogilvie, .....	"			11 94	3 75	15 56	6 15	3 90	58 70	38830
" 26	"	38831	F. Bachaud, Waterloo...5 "	10	C. R. Cousins & Co., St. Jean.	"			11 52	3 16	15 75	2 74	3 40	63 43	38831



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"	27	"	38832	B. E. Goyette, Magog	5 "	10	The Flavelle Milling Co.	"	11 54	3 32	13 50	6 42	4 34	60 88	38832
April	27	"	38834	M. Bisquet, St. Hyacinthe	5 "	10	Vendor	(Chop feed (bar ley.)	9 80	2 25	10 50	6 15	2 60	68 70	38834
"	27	"	38835	J. M. Galardy, St. Hyacinthe	5 "	10	Lake of the Woods Milling Co., Montreal	Chop feed (oat)	8 60	2 65	9 25	6 70	1 18	68 62	38835
"	28	"	38836	McFail & Massé, Roxton Falls	5 "	"	P. McIntosh & Son, Toronto	" (bar ley.)	9 08	2 10	13 06	3 90	2 80	68 84	38836
"	29	"	38837	C. O. Roberge, Victoriaville	5 "	"	Winkler Milling Co., Man.	Chop feed (b meal.)	11 55	0 87	10 00	6 36	2 56	68 66	38837
May	5	"	38839	Clough & Co., Lennoxville	5 "	"	Vendors	"	11 35	3 44	11 38	4 42	2 24	67 17	38839
"	6	"	38840	Brault & Paradis, Stanstead	5 "	10	The Quaker Oats Co., Peterboro, Ont.	Chop feed (vie tor.)	10 49	3 40	8 06	11 23	3 34	63 18	38840
"	11	"	38841	E. Sylvestre, St. Guillaume	5 "	"	(C) Racicot, St. Hyacinthe	Chop feed (oats and barley.)	11 26	1 09	11 81	7 50	2 68	65 66	38841
"	18	"	38842	U. St. Jean, Contrecoeur	5 "	10	Jos. Ward & Cie, Montreal	Chop feed (flax seed & barley.)	9 93	11 75	11 81	4 87	7 64	54 00	38842
"	18	"	38843	Laferriere & freres, Pierreville	5 "	10	Lake of the Woods	Chop feed (mix ed.)	11 96	2 30	14 87	4 29	3 50	63 08	38843
"	19	"	38844	J. B. Gagne fils, Sorel	5 "	8	Vendors	"	11 76	1 81	9 87	13 85	3 64	59 07	38844
"	24	"	38845	E. Chaput, Egypte de Mil-ton	5 "	10	N. Mercier, Upton	Chop feed (corn)	10 60	2 85	8 81	1 85	1 30	74 50	38845

DISTRICT OF MONTREAL J. J. COSTIGAN, INSPECTOR.

May	14	Stock feeds.	40202	James McDonnell, 128 Wel- lington St., Montreal.	10	"	"	Bran	11 72	4 00	14 06	9 01	4 74	56 17	40202
"	14	"	40203	Bruneau Currie & Co., Youville Place, Montreal.	10	"	"	(Bran (maple leaf brand).	11 61	4 25	14 62	8 80	5 48	55 24	40203
"	17	"	40204	W. L. Hogg, 1571 Notre Dame E., Montreal.	5	"	"	Bran	12 67	4 27	16 19	8 05	5 14	53 68	40204
"	18	"	40205	James Scott & Co., 132 Antoine St., Montreal.	10	"	"	"	10 58	3 93	15 56	7 73	5 38	56 82	40205
"	22	"	40206	The Can. Grain & Feed Co., 407 Cadieux St., Montreal.	5	"	Lake of the Woods Milling Co.	"	11 44	4 07	15 12	9 26	5 60	54 51	40206
"	26	"	40207	McDonald & Robt., field, P.Q.	5	"	Vendors	"	12 31	4 73	14 81	9 78	5 50	52 87	40207
"	27	"	40208	E. Benoit fils, 181 St. Paul St., Montreal.	10	"	Orlie Flour Milling Ltd.	"	11 76	5 33	15 25	8 90	5 40	53 36	40208
June	3	"	40209	B. Vaillancourt, 1195 Lawrence B., Montreal.	10	"	"	"	10 25	4 33	13 62	16 21	6 40	55 19	40209
"	3	"	40210	B. Ethier, 1119 St. Gustave, Montreal.	10	"	"	"	12 30	3 65	14 50	9 87	5 90	53 78	40210
"	9	"	40211	Gustave Laballe & Cie, 1100 Dorchester St., Montreal.	10	"	"	"	11 74	3 39	15 06	8 63	5 46	55 72	40211
May	14	"	40212	James McDonnell, 128 Wel- lington St., Montreal.	15	"	"	Shorts	11 37	5 60	15 94	7 35	4 54	55 11	40212



TABLE I—STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.		Cost.	Inspector's Report. (Is not an expression of Opinion.)	Results of Analysis.						Number of Sample.
							Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference.	
					(Quantity. Cents.)		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
DISTRICT OF MONTREAL—Concluded.													
1909													
May 14	Stock feeds...	40213	Bruneau Currie & Co., Youville Place, Montreal.	5 lbs.	10	Shorts.....	11.62	5.66	14.19	5.00	3.90	59.63	40213
" 14	"	40214	F. X. Benoit et fils, Commissioners, Montreal.	71 5 "	10	"	9.55	4.50	16.19	6.15	5.14	58.47	40214
" 17	"	40215	W. L. Hogg, 1571 Notre Dame St. E., Montreal.	5 "	5	T. H. Taylor Milling Co.,	11.17	3.49	14.44	4.62	3.91	62.34	40215
" 18	"	40216	James Scott & Co., 132 St. Antoine St., Montreal.	5 "	10	"	10.37	3.83	14.44	4.87	3.48	63.01	40216
" 21	"	40217	W. Lamoignon & Co., Atwater Ave., Montreal.	5 "		"	10.75	5.40	15.12	6.87	4.78	57.08	40217
" 26	"	40218	McDonald & Robb, field, P.Q.	5 "		"	11.86	3.91	16.18	4.65	3.74	59.66	40218
" 27	"	40219	J. P. Lebel, 67 Commissioners, Montreal.	5 "	10	"	10.81	5.32	16.25	6.66	4.00	56.96	40219
" 27	"	40220	E. Benoit et fils, 181 St. Paul St., Montreal.	5 "	10	Ogilvie Flour Milling Co., Ltd.	10.49	4.32	13.00	9.92	3.64	58.63	40220
June 3	"	40221	B. Vaillancourt, 1195 Lawrence B., Montreal.	5 "	10	"	11.46	5.68	16.56	5.77	3.99	56.63	40221
May 14	"	40222	Bruneau Currie & Co., Youville Place, Montreal.	5 "		Middlings.....	10.86	1.28	13.63	1.82	1.80	70.61	40222
" 14	"	40223	F. X. Benoit et fils, Commissioners, Montreal.	5 "	10	"	9.95	3.50	18.00	3.45	3.40	61.70	40223
" 17	"	40224	W. L. Hogg, 1571 Notre Dame St. E., Montreal.	5 "	10	"	12.08	0.97	13.56	0.69	1.30	71.40	40224
" 21	"	40225	C. Campbell & Co., 731 Charlevoix St., Montreal.	5 "	10	"	11.80	3.02	15.81	6.76	4.60	58.01	40225
" 27	"	40226	J. P. Lebel, 67 Commissioners St., Montreal.	5 "	10	"	10.24	2.41	13.87	1.12	1.90	70.46	40226
" 27	"	40227	E. Benoit et fils, 181 St. Paul St., Montreal.	5 "	10	"	10.99	3.65	16.19	6.60	3.80	58.77	40227
June 9	"	40228	Gustave Labelle & Co., Dorchester St., Montreal.	5 "	10	"	9.73	5.41	16.00	7.46	4.18	57.22	40228



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"	9	40229	A. Guertin, 8 Mountain St., Montreal.	5 "	10	...	"	11.53	4.01	15.69	6.67	3.94	58.16	40229
May 14	14	40232	James McDonnell, 128 Wel- lington St., Montreal.	5 "	15	...	Chop feed.....	10.00	4.29	10.00	10.62	3.40	61.37	40232
"	14	40233	Bruneau, Currie & Co., You- ville Place, Montreal.	5 "	15	McDonald & Robb, Valley- field P.Q.	"	9.85	2.15	16.19	7.05	3.40	61.69	40233
"	14	40234	F. X. Benoit et fils, 71 Com- missioners St., Montreal.	5 "	10	...	"	10.87	2.05	12.63	9.43	3.44	61.58	40234
"	17	40235	W. L. Hogg, 1571 Notre- Dame St., Montreal.	5 "	10	Vendor	"	10.08	4.22	9.63	8.81	3.34	63.92	40235
"	18	40236	James Scott & Co., 132 St. Antoine St., Montreal.	5 "	10	...	"	9.92	2.73	10.94	9.89	3.32	63.20	40236
"	21	40237	C. Campbell & Co., 731 Charlevoix St., Montreal.	5 "	10	W. Lamarre & Co., Mon- treal.	"	10.84	3.43	10.31	11.87	3.54	60.01	40237
"	21	40238	W. Lamarre & Co., Mon- treal.	5 "	...	...	"	9.78	3.11	10.75	10.06	2.90	63.40	40238
"	21	40239	The Canada Grain & Feed Co., 409 Cadieux Street, Montreal.	5 "	10	...	"	10.16	3.96	11.00	12.25	4.10	58.53	40239
"	26	40240	McDonald & Robb, Valley- field P.Q.	5 "	...	Vendor	"	11.85	3.02	13.62	6.08	2.26	63.17	40240
"	27	40241	J. P. Lebel, 67 Commis- sioners St., Montreal.	5 "	10	...	"	10.01	7.36	12.31	4.64	2.24	63.44	40241

DISTRICT OF OTTAWA, J. A. RICKEY, INSPECTOR.

May 21	21	41201	G. D. Atkinson, Cornwall.	5 lbs.	5	Vendor	Bran.....	10.53	3.05	15.13	7.88	5.44	57.97	41201
"	21	41202	Tilton & Graham, Corn- wall.	5 "	5	Hunt Bros., London, Ont..	"	10.49	5.46	14.88	8.34	5.24	55.59	41202
"	21	41203	J. G. Broderick, Corn- wall.	5 "	5	Campbell Milling Co., Tor- onto Junction.....	"	11.49	3.29	15.56	8.94	5.40	55.32	41203
"	22	41204	The Pembroke Milling Co., Pembroke.	5 "	5	Vendors.....	"	9.85	2.30	15.38	12.36	5.90	54.27	41204
"	22	41205	J. W. Montgomery, Pem- broke.	5 "	5	Ogilvie Milling Co., Winni- peg.	"	10.36	2.22	14.25	11.17	5.64	56.36	41205
"	29	41206	C. Whitney & Son, Pres- cott.	5 "	5	"	"	10.87	3.64	14.19	9.04	5.74	56.52	41206
"	29	41207	J. Mayberry & Co., Pres- cott.	5 "	5	Lake of the Woods Milling Co., Montreal.	"	9.50	4.70	14.94	11.65	5.84	53.37	41207
"	29	41208	J. Dubrule & Co., Prescott.	5 lbs.	5	Lake of the Woods Milling Co., Keewatin.	"	10.04	3.41	14.44	8.89	5.34	57.88	41208
June 5	5	41209	W. H. Poole, Smith's Falls.	5 "	5	"	"	10.98	3.09	14.38	9.78	5.04	56.73	41209
"	5	41210	A. May, Smith's Falls.....	5 "	5	Ogilvie Milling Co., Mont- real.	"	9.40	4.30	14.50	10.90	6.00	54.90	41210
May 18	18	41211	Brown Bros., Richmond	5 "	5	Lake of the Woods Co., Montreal.	Shorts.....	9.83	4.26	16.38	4.78	4.74	60.01	41211



TABLE I STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.		Quantity.	Cost (Cents).	Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.						Number of Sample.	
			Name and Address of Vendor.	Quantity.				Cost (Cents).	Moisture.	Fat Insect.	Proteids.	Crude Fiber.	Ash.		Difference.
DISTRICT OF OTTAWA (Concluded).															
1909									p.c.	p.c.	p.c.	p.c.	p.c.		
May	21	Stock feeds.	41212	Tilton & Graham, Cornwall.	5 lbs.	5	Lake of the Woods Co., Short's, Keewatin.	.....	9.87	5.11	17.00	6.30	4.20	57.52	41212
"	21	"	41213	J. P. Broderick, Cornwall.	5 "	5	Campbell Milling Co., Toronto, Junction.	.....	10.35	3.63	15.13	4.45	3.24	63.20	41213
"	22	"	41214	Jno. P. Millar, Pembroke.	5 "	5	Quaker Oats Co., Peterboro.	.....	10.51	4.61	16.25	5.64	3.60	59.39	41214
"	22	"	41215	Pembroke Milling Co., Pembroke.	5 "	5	Vendors.	.....	10.90	4.15	16.25	3.47	3.60	61.63	41215
"	22	"	41216	J. W. Montgomery, Pembroke.	5 "	5	Ogilvie Milling Co., Winnipeg.	.....	9.63	1.20	16.88	6.50	4.16	58.63	41216
"	22	"	41217	C. Whitney & Son, Prescott.	5 "	5	"	.....	9.55	4.25	16.88	6.15	4.44	58.73	41217
"	22	"	41218	J. Mayberry & Co., Prescott.	5 "	5	Lake of the Woods Milling Co., Winnipeg.	.....	9.40	3.75	17.00	5.25	1.14	60.46	41218
"	22	"	41219	J. Dubrule & Co., Prescott.	5 "	5	Quaker Oats Co., Peterboro.	.....	9.00	3.60	15.94	5.00	3.50	62.96	41219
"	22	"	41220	"	5 "	5	Ogilvie Milling Co., Winnipeg.	.....	11.59	4.65	15.94	7.51	3.90	56.41	41220
"	21	"	41221	G. D. Atkinson, Cornwall.	5 "	5	Vendor.	..... Middlings.	10.10	2.50	14.94	2.25	3.16	67.11	41221
"	21	"	41222	Tilton & Graham, Cornwall.	5 "	5	Hunt Bros., London, Ont.	.....	11.19	4.09	16.13	4.39	3.34	60.86	41222
June	2	"	41223	G. W. McKay, Ottawa.	5 "	5	Lake of the Woods Milling Co., Keewatin.	.....	10.61	4.92	17.31	1.11	4.00	62.05	41223
"	2	"	41224	"	5 "	5	Maple Leaf Milling Co., Kenora, Ont.	.....	10.56	2.70	15.75	5.13	3.26	62.60	41224
"	2	"	41225	J. S. Martin, Ottawa.	5 "	10	Lake of the Woods Milling Co., Keewatin.	.....	10.86	2.42	15.56	2.27	2.10	66.79	41225
"	5	"	41226	Woods Milling Co., Smith's Falls.	5 "	5	Vendors.	.....	9.49	3.00	14.44	2.30	1.70	63.16	41226



SESSIONAL PAPER No. 14

"	12	"	"	"	"	41227 James McDougall, Brockville	10	Hunt Bros., London, Ont.	"	"	9 35	3 50	15 06	4 80	4 00	63 29	41226
"	12	"	"	"	"	41228 H. Brown & Sons, Brockville	8	Vendors	"	Food formerly sold as Middlings.	10 60	3 24	14 81	0 70	1 54	69 11	41228
"	12	"	"	"	"	41229 A. E. Cameron, Brockville	8	Ogilvie Milling Co., Fort William.	"	"	10 72	0 95	12 88	0 22	3 40	71 83	41229
"	16	"	"	"	"	41230 H. Pullan, Ottawa	5	Unknown	"	Middlings	11 67	1 15	13 13	0 95	0 78	72 32	41230
May	18	"	"	"	"	41231 Brown Bros., Richmond, Ont.	5	Lake of the Woods Milling Co.	"	Chop feed (wheat)	11 60	3 10	15 31	4 58	4 80	60 61	41231
"	21	"	"	"	"	41232 G. D. Atkinson, Cornwall	5	Vendor	"	"	11 05	1 28	10 14	9 90	2 64	61 69	41232
"	21	"	"	"	"	41233 J. P. Broderick, Cornwall	5	Campbell Milling Co., Toronto Junction.	"	"	10 61	2 83	11 75	5 89	2 81	66 08	41233
"	22	"	"	"	"	41234 Pembroke Milling Co., Pembroke	5	Vendor	"	"	10 45	3 10	15 31	10 55	3 00	57 59	41234
"	22	"	"	"	"	41235 W. A. Hunter & Son, Pembroke	5	Unknown	"	"	9 75	2 15	12 19	9 95	3 30	62 66	41235
"	22	"	"	"	"	41236 J. W. Montgomery, Pembroke	5	Ogilvie Milling Co.	"	"	9 85	3 80	15 31	5 90	4 50	60 64	41236
June	2	"	"	"	"	41237 Ed. St. Germain, Ottawa	8	Quaker Oats Co., Peterboro.	"	Chop feed (wheat)	8 70	2 10	6 75	12 80	4 39	65 35	41237
"	2	"	"	"	"	41238 L. O. Joly, Ottawa	8	"	"	"	10 51	3 22	7 50	13 51	4 20	61 03	41238
"	2	"	"	"	"	41239 J. S. Martin, Ottawa	10	"	"	"	9 20	2 10	7 11	13 85	1 24	63 17	41239
"	5	"	"	"	"	41240 Woods Milling Co., Smith's Falls	10	Vendors	"	"	8 75	3 40	11 38	10 15	3 10	63 22	41240

DISTRICT OF KINGSTON JAS. HOGAN, INSPECTOR.

May	3	Stock feeds.	"	5 lbs	"	41101 W. P. Peters, Kingston	10	Lake of the Woods Milling Co.	"	Bran	10 68	5 55	14 38	9 42	5 50	54 47	41101
"	3	"	"	"	"	41102 J. A. McParlane, Kingston	10	"	"	"	10 57	4 83	15 31	8 55	5 44	55 30	41102
"	3	"	"	"	"	41103 Kingston Milling Co., Kingston	10	Vendors	"	"	10 71	4 47	13 06	10 22	5 50	56 01	41103
"	4	"	"	"	"	41104 C. Rathman, Belleville	10	Ogilvie Milling Co., Montreal.	"	"	10 82	4 91	14 00	10 08	6 26	53 93	41104
"	4	"	"	"	"	41105 H. E. Fairfield, Belleville	10	Quaker Oats Co., Peterboro.	"	"	11 22	4 33	15 25	7 92	5 48	55 80	41105
"	5	"	"	"	"	41106 E. A. Duncan, Cobourg	10	Lake of the Woods	"	"	8 60	4 45	15 31	10 55	5 40	55 69	41106
"	5	"	"	"	"	41107 Thompson & MacDonald, Cobourg	10	"	"	"	10 93	3 06	15 25	8 72	5 24	56 80	41107
"	6	"	"	"	"	41108 Roland Denne, Peterboro.	10	Quaker Oats Co., Peterboro.	"	"	10 61	3 71	15 06	8 90	5 96	55 64	41108
"	6	"	"	"	"	41109 Central Milling Company, Peterboro.	10	Vendors	"	"	11 14	4 39	13 06	10 04	6 88	54 49	41109



TABLE I—STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.								Number of Sample.
				Quantity.	Cents.		Moisture.	Fat (Indirect.)	Proteids.	Crude Fibre.	Ash.	Difference.			
DISTRICT OF KINGSTON—Continued.															
1909.								p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
May	6 Stock feeds.	41110	H. Handrey, Peterboro.	5 lbs.	10	Central Milling Co., Peterboro.	Bran.....	9.75	3.75	12.69	11.55	6.50	55.76	41110	
"	"	41111	W. P. Peters, Kingston	5 "	10	Lake of the Woods M. Co.	Shorts .....	10.52	5.23	16.81	6.20	4.24	57.00	41111	
"	"	41112	J. A. McFarlane, Kingston.	5 "	10	Wasts Canada Milling Co.	" .....	10.14	4.60	16.18	5.35	3.80	59.93	41112	
"	"	41113	Kingston Milling Co., Kings- ton.	5 "	10	Vendors.....	" .....	9.97	3.95	16.38	5.26	3.70	60.74	41113	
"	"	41114	D. Hutchison, Kingston	5 "	10	Seaforth Milling Co.....	" .....	11.00	4.59	14.50	6.08	4.40	59.43	41114	
"	"	41115	C. Rathman, Belleville	5 "	8	Ogilvie Milling Co., Mon- treal.	" .....	11.21	4.52	16.19	5.25	3.90	58.93	41115	
"	"	41116	H. E. Fairfield, Belleville	5 "	10	Lake of the Woods Milling Co.	" .....	10.51	4.26	14.50	9.48	4.28	56.97	41116	
"	"	41117	R. Denne, Peterboro',	5 "	10	Quaker Oats Co., Peterboro'.	" .....	10.08	4.81	16.06	5.75	3.90	59.40	41117	
"	"	41118	Central Milling Co., Peter- boro'.	5 "	10	Vendors .....	" .....	10.83	3.93	14.81	6.01	4.36	60.06	41118	
"	"	41119	J. H. Savigny, Peterboro'.	5 "	10	Central Milling Co., Peter- boro'.	" .....	10.99	3.36	14.25	4.98	3.66	62.76	41119	
"	"	41120	Quaker Oats Co., Peterboro'.	5 "	10	Vendors.....	" .....	9.89	4.70	16.44	4.88	3.80	60.29	41120	
"	"	41121	W. P. Peters, Kingston	5 "	10	Lake of the Woods Milling Co.	Middlings .....	11.48	1.75	14.69	1.04	1.40	69.64	41121	
"	"	41122	J. A. McFarlane, Kingston.	5 "	10	Wasts Canada Milling Co.	" .....	10.25	4.40	15.56	5.90	3.62	60.27	41122	
"	"	41123	D. Hutchison,	5 "	10	Ogilvie Milling Co., Mon- treal.	" brand. Middlings .....	10.35	3.63	16.25	4.45	3.90	61.42	41123	
"	"	41124	C. Rathman, Belleville.	5 "	10	" ..	Shorts ..	10.14	4.99	17.50	4.59	3.64	59.14	41124	
"	"	41125	A. Baker, Picton	5 "	10	A. Baker Milling Co.	Shorts ..	10.32	5.22	16.44	5.18	3.74	59.10	41125	



SESSIONAL PAPER No. 14

"	5	"	41126	E. A. Duncan, Cobourg...	5 "	10	Ogilvie, Montreal.....	"	10 13	4 87	16 44	5 35	4 10	59 11	41126
"	5	"	41127	Thompson & McDonald, Cobourg.	5 "	10	Ogilvie Milling Co., Montreal.	"	10 16	5 16	16 44	7 40	3 80	57 04	41127
"	6	"	41128	Central Milling Co., Peterboro'.	5 "	10	Vendors .....	"	11 02	4 17	14 81	5 75	4 20	60 05	41128
"	6	"	41129	H. Handrey, Peterboro'.	5 "	10	Lakefield Milling Co.....	"	9 65	4 55	14 25	8 60	3 68	59 27	41129
"	6	"	41130	C. N. Brown, Peterboro'...	5 "	10	Central Milling Co .....	"	9 70	4 30	15 50	9 10	4 04	57 36	41130
"	3	"	41131	W. P. Peters, Kingston ..	5 "	10	Quaker Oats Co., Peterboro'. Chop feed.	"	10 56	3 82	10 44	10 32	3 10	61 76	41131
"	3	"	41132	J. A. McFarlane, Kingston.	5 "	10	" " " "	"	10 79	2 78	9 00	8 46	2 92	66 05	41132
"	3	"	41133	Kingston Milling Co., Kingston.	5 "	10	Vendors .....	"	10 50	3 33	10 69	11 05	3 64	60 79	41133
"	4	"	41134	C. Rathman, Belleville. ..	5 "	10	B. Cooper, Belleville..	"	10 41	3 99	10 75	10 52	3 10	61 23	41134
"	4	"	41135	H. E. Fairfield, Belleville	5 "	10	Vendor .....	"	10 01	3 09	10 69	10 53	3 54	62 14	41135
"	4	"	41136	A. Baker, Picton.....	5 "	10	A. Baker Milling Co.....	"	10 51	2 33	10 06	9 33	3 36	64 41	41136
"	5	"	41137	E. A. Duncan, Cobourg	5 "	15	A. Pratt, Cobourg..	"	11 53	3 94	12 06	3 18	1 88	67 41	41137
"	5	"	41138	Thompson & McDonald, Cobourg.	5 "	10	Vendors ..	"	20 24	2 94	10 69	10 93	3 30	61 90	41138
"	6	"	41139	R. Denne, Peterboro.	5 "	10	"	"	9 80	3 20	10 13	13 55	3 40	59 92	41139
"	6	"	41140	Central Milling Co., Peterboro.	5 "	10	"	"	11 49	5 09	8 81	1 67	1 04	71 90	41140

DISTRICT OF TORONTO, H. J. DAGER, INSPECTOR.

May	4	Stock feeds...	36264	A. W. Maguire, Hamilton..	5 lbs.	10	Kerr Milling Co., Dundas..	Bran. ....	11 10	3 08	13 75	9 13	6 30	56 64	36264
"	4	"	36265	H. MacFarlane, "	5 "	15	Woods Milling Co., Hamilton.	"	10 05	4 37	13 87	12 21	6 20	53 30	36265
"	6	"	36266	Riverside Milling Co., West land.	5 "	7	Vendors.....	"	12 45	3 90	14 37	9 60	4 50	55 18	36266
"	6	"	36267	Hedley Milling Co., Thorold.	5 "	6	"	"	11 20	3 85	14 00	10 95	4 60	55 40	36267
"	8	"	36268	W. Kearns & Co., Burlington.	5 "	7	Woods Milling Co., Brantford.	"	11 51	3 47	13 50	8 73	5 54	64 25	36268
"	11	"	36269	J. Williams, 340 Queen St., Toronto.	5 "	12	Lake of the Woods Milling Co., Toronto.	"	11 12	3 16	14 69	10 38	6 10	54 55	36269
"	12	"	36270	J. O. Gadsby, 241 Queen St., Toronto.	5 "	10	The Maple Leaf Flour Mills Co., Ltd., Kenora, Ont.	"	11 39	3 95	16 00	8 48	5 10	55 08	36270
"	13	"	36271	G. M. Wilson, 290 Dundas St. West, West Toronto.	5 "	5	The Campbell Milling Co., Ltd., West Toronto.	"	9 80	4 40	14 94	8 00	4 90	57 96	36271



1 GEORGE V., A. 1911

TABLE I—STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.		Quantity.	Cost.	Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of Opinion.)	RESULTS OF ANALYSIS						Number of Sample.
										Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference.	
1909.										p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
May 18	Stock feeds.	36272	Jas. Reynolds, Aurora.	5 lbs	10	J. Knox & Co., Staynor.	Brans.			12.72	2.11	13.56	9.92	5.84	55.85	36272
" 18	"	36273	H. V. Denne & Co., New Market, Ont.	5 "	5	Vendors.	"			12.47	1.93	13.43	10.84	5.64	55.69	36273
" 3	"	36274	Wm. Armstrong, Dundas.	5 "	10	Kerr Milling Co., Dundas.	Middlings.			10.75	3.73	15.38	7.01	4.56	58.57	36274
" 4	"	36275	J. Smuck, 270 Victoria Ave., Hamilton.	5 "	10	Woods Milling Co., Hamilton.	"			8.95	2.35	15.81	5.85	4.40	62.64	36275
" 4	"	36276	A. W. Swazie, 647 Barton St., Hamilton.	5 "	10	"	"			10.89	4.43	15.56	4.87	4.94	59.31	36276
" 6	"	36277	W. D. Davidson, 259 Paul St., St. Catharines.	5 "	10	Hedley Shaw Milling Co., St. Catharines.	"			10.26	5.02	15.75	5.96	3.90	59.11	36277
" 8	"	36278	J. F. Campbell, Burlington.	5 "	10	Woods Milling Co., Hamilton.	"			11.30	4.87	16.19	4.82	3.68	59.14	36278
" 13	"	36279	Wm. Willoughby, 186 Dundas St. West, W. Toronto.	5 "	10	West. Canada Milling Co., Ltd., Toronto.	"			10.78	4.29	16.38	5.55	4.00	59.00	36279
" 13	"	36280	M. Austin, 500-502 St. West, West Toronto.	5 "	7	Queen City Flour Mills Co., Ltd., Toronto.	"			11.45	4.85	15.68	6.07	3.88	58.07	36280
" 17	"	36281	Estate of H. Wilson, ville.	5 "	8	T. H. Ashbury & Sons, Oakville.	"			11.16	4.71	14.28	5.72	4.00	60.13	36281
" 18	"	36282	W. H. Eves, Newmarket.	5 "	8	F. H. Robinson, Glenville.	"			11.56	3.22	13.13	1.42	2.36	68.31	36282
" 20	"	36283	R. H. Beaty, 1103 St., Toronto.	5 "	8	The Alex. Brown Milling Co., Ltd., Toronto.	"			10.92	6.83	15.25	5.75	4.34	56.91	36283
" 3	"	36284	E. Miller, Dundas.	5 "	8	R. A. Thompson, Lynden.	Shorts.			10.34	3.30	14.50	5.18	4.38	62.30	36284
" 4	"	36285	J. A. Clark, 444 York Hamilton.	5 "	10	Woods Milling Co., Hamilton.	"			10.38	4.97	15.38	4.80	4.04	60.43	36285
" 5	"	36286	W. H. Wodelhouse, 28 St. South, Hamilton.	5 "	10	Kerr Milling Co., Dundas.	"			8.70	4.15	14.94	8.55	4.50	59.16	36286
" 6	"	36287	A. McClenchy, Thorold.	5 "	7	Hedley Shaw Milling Co., Thorold.	"			10.18	4.74	16.81	5.10	3.90	59.27	36287



SESSIONAL PAPER No. 14

"	7	"	"	36288 J. K. Black, 23 James St., 15 " "	7	"	"	"	10.86	4.72	15.75	5.89	3.88	58.91	36288
"	7	"	"	St. Catharines.	10	Vendors.	"	"	10.85	3.20	15.06	4.29	3.64	62.96	36289
"	12	"	"	36290 J. W. McDonald, 433 Queen St. E., Toronto.	5	The Campbell Milling Co., West Toronto.	"	"	11.70	4.89	15.81	5.30	3.96	58.34	36290
"	12	"	"	36291 J. White, 682 Queen St. E., Toronto.	7	The Tillson Co., Ltd., Tillsonburg.	"	"	10.34	6.12	17.12	5.34	4.06	57.02	36291
"	13	"	"	36292 Alexander Brown, Milling & Elevator Co., Ltd., Toronto	5	Vendors.	"	"	11.22	5.68	15.81	7.51	4.08	55.70	36292
"	18	"	"	36293 Stiver Bros., Aurora.	10	Quaker Oats Co., Peterboro.	"	"	11.72	5.24	15.81	6.13	3.86	57.24	36293
"	17	"	"	36299 T. H. Ashbury & Sons, Oakville.	8	Vendors.	"	Chop feed	12.00	2.75	10.94	6.48	2.70	65.13	36299
"	18	"	"	36300 Aurora Flouring Mills, Aurora.	10	"	"	"	10.99	2.12	7.69	11.45	3.34	64.41	36300
"	4	"	"	41301 H. W. Fair, Crown Point, Hamilton.	10	Vendor	"	"	10.05	4.45	10.00	12.50	2.84	60.16	41301
"	4	"	"	41302 W. Pringle & Son, 280 York St., Hamilton.	8	Caledonia Milling Co., Caledonia.	"	"	8.95	2.35	11.63	5.25	2.60	69.22	41302
"	5	"	"	41303 J. Penfold, 96 John St. South, Hamilton.	10	The Quaker Oats Co., Peterboro.	"	"	10.49	3.64	7.38	9.86	3.48	65.15	41303
"	5	"	"	41304 Jas. Dunlop & Co., Ltd., 127 John St. South, Hamilton.	10	Vendors.	"	"	10.35	2.40	10.50	9.00	2.60	65.15	41304
"	7	"	"	41305 Lewis Moyer, 59 King St., St. Catharines.	5	The McCann Knox Milling Co., Toronto.	"	"	6.85	3.72	8.68	10.60	3.46	66.69	41305
"	12	"	"	41306 The Chalmers Milling Co., East Toronto.	10	Vendors.	"	"	9.40	3.00	10.25	10.50	2.82	64.03	41306
"	14	"	"	42307 The Watt Milling and Feed Co., Ltd., 211 Royce Ave., Toronto.	10	"	"	"	9.15	2.75	10.56	10.25	3.40	63.89	41307
"	14	"	"	41308 The Campbell Milling Co., Ltd., West Toronto.	6	"	"	"	10.51	4.07	12.06	7.13	3.44	62.79	41308

DISTRICT OF LONDON - T. KIDD, INSPECTOR.

May	6	Stock feeds.	30650 Vivian & Co., Goderich	3 lbs.	5	Western Canada Flour Mills Co., Goderich.	Shorts.	9.55	5.00	16.69	4.55	4.10	60.11	30650
"	7	"	30651 " " " " " "	3 " "	5	" " " " " "	Bran.	10.58	2.89	15.06	10.02	5.60	55.85	30651
"	7	"	30652 Joseph Stothers, Blythe	3 " "	5	Ogilvie & Co., Winnipeg.	Shorts	10.66	3.65	14.44	4.40	3.88	62.97	30652
"	7	"	30653 " " " " " "	3 " "	5	Quaker Oats Co., Peterboro.	Cattle feed.	10.75	1.80	9.88	5.60	1.96	70.01	30653
"	7	"	30654 T. A. Mills, Wingham	3 " "	5	Wallaceburgh Sugar Beet Co. Wallacelburgh.	Sugar beet pulp.	9.60	2.55	8.25	14.95	2.84	61.81	30654
"	7	"	30655 R. Awde, Wingham	3 " "	5	Pepper Bros., Milverton.	Shorts.	9.61	5.20	15.69	5.17	4.04	60.29	30655
"	7	"	30656 " " " " " "	3 " "	5	Ogilvie & Co., Winnipeg.	Bran.	10.16	3.59	14.81	9.18	5.40	56.86	30656



TABLE I STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion.)	RESULTS OF ANALYSIS.					Number of Sample.
				Quantity.	Cents.			Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	
DISTRICT OF LONDON—Concluded.													
1909.								p.c.	p.c.	p.c.	p.c.	p.c.	
May	7	Stock feeds.	J. H. McDonald	3 lbs.	5	Tillson & Co., Tillsonsburch	Chop feed	8.10	2.85	15.31	5.90	6.80	30657
"	7	"	Korotz & Co.	3 "	5	Pfeffer Bros., Listowell	Shorts.	10.11	4.95	15.94	5.67	4.20	30658
"	7	"	R. A. Chimie, Listowell	3 "	5	"	Bran.	10.49	4.01	14.62	9.36	5.72	30659
"	7	"	"	3 "	5	Ogilvie Milling Co., Winnipeg.	Shorts.	9.59	5.24	16.63	7.79	4.84	30660
"	8	"	Steward Bros., Mitchell	3 "	5	Vendors.	"	11.39	2.49	14.19	7.94	5.14	30661
"	8	"	"	3 "	5	"	Bran.	10.10	3.96	14.69	3.96	3.16	30662
"	8	"	R. A. Sproat, Seaforth	3 "	5	Tavistock Milling Co., Tavistock.	"	10.82	2.83	14.06	8.75	5.60	30663
"	8	"	"	3 "	5	"	Shorts.	11.36	5.76	14.68	6.62	4.68	30664
"	10	"	Seaforth Milling Co., Seaforth.	3 "	5	Vendors	"	11.09	4.27	14.06	5.11	3.96	30665
"	10	"	W. E. Kearslake.	3 "	5	Seaforth Milling Co., Seaforth.	Bran.	10.86	3.01	11.81	13.20	5.80	30666
"	10	"	Seaforth Milling Co., Seaforth.	3 "	5	Vendors	"	9.60	4.25	14.63	8.55	5.80	30667
"	10	"	"	3 "	5	"	Corn chop.	11.02	3.09	10.00	2.85	1.44	30668
"	10	"	"	3 "	5	"	Shorts.	10.36	4.63	18.93	5.19	5.74	30669
"	11	"	George Young, Guelph	3 "	5	Vendor.	Chop.	12.58	2.62	10.56	6.83	2.30	30670
"	11	"	James Hewer & Son, Guelph	3 "	5	Lake of the Woods Milling Co., Lake of the Woods.	Bran.	11.49	5.10	13.94	9.43	6.74	30671
"	11	"	"	3 "	5	"	Shorts.	11.50	4.98	16.18	5.71	3.90	30672



SESSIONAL PAPER No. 14

"	11	"	"	30673	James Hewer & Son, Guelph	3 lbs.	5	Lake of the Woods Milling Co., Lake of the Woods.	Corn chop.	11 84	4 77	9 00	1 44	1 60	71 35	30673
"	11	"	"	30674	W. F. Stewart, Guelph.	5 "	5	Western Canada Flour Mills Co.	Bran.	9 22	3 00	14 19	8 15	6 00	59 31	30674
"	11	"	"	30675	W. F. Stewart & Son, Guelph.	5 "	5	"	Shorts	10 38	4 95	17 00	5 12	3 90	58 65	30675
"	11	"	"	30676	"	5 "	5	"	Chop.	10 94	2 95	10 25	6 46	2 80	66 60	30676
"	12	"	"	30679	W. B. Doughty, Guelph.	3 "	10	Vendor.	"	10 45	2 70	10 50	9 80	3 14	63 41	30679
"	13	"	"	30680	A. K. Morrison, Stratford	3 "	5	Quaker Oats Co., Peterboro.	"	10 90	2 31	9 63	10 17	3 40	63 59	30680
"	13	"	"	30682	John Byrs, Stratford.	4 "	10	McLeod Milling Co., Stratford.	"	12 67	2 98	8 81	1 21	1 40	72 93	30682

DISTRICT OF WINDSOR, JOHN TALBOT, INSPECTOR.

April 28	Stock feeds.	35921	Geo. Leith, London, Ont.	5 lbs.	5	Dexter & Son, London, Ont.	Bran.	9 88	4 71	15 12	10 33	6 20	53 76	35921
"	"	35922	A. Wray, 874 Dundas St., London, Ont.	5 "	10	Hawkins, St. Johns, Ont.	Shorts.	9 80	5 25	15 25	5 18	3 96	60 56	35922
"	"	35923	H. English, 1006 Dundas St., London, Ont.	5 "	10	Marshall & Twitchen.	"	10 27	4 61	15 31	4 37	3 76	61 68	35923
"	"	35924	J. A. Tucker, 342 Egerton St., London, Ont.	5 "	10	Hunt Bros., London	Bran.	10 22	4 86	15 75	8 91	5 80	54 46	35924
"	"	35925	J. J. Alexander, Egerton St., London, Ont.	5 "	10	G. Leith, London	Shorts	10 24	5 41	16 68	5 18	3 76	58 73	35925
"	"	35926	C. W. Summers, 577 Hamilton Road, London, Ont.	5 "	10	Hunt Bros., London.	Bran.	10 11	4 16	14 94	9 38	5 24	56 17	35926
"	"	35927	Tupholme & Son, 541 Hamilton Road, London, Ont.	5 "	10	Geo. Leith, London	Shorts	9 55	4 15	16 88	8 25	4 00	57 17	35927
"	"	35928	McFarlane & Co., 412 Hamilton Road, London, Ont.	5 "	10	Hunt Bros., London	"	10 03	5 16	16 05	5 00	3 80	59 96	35928
"	"	35929	E. H. Walker, 318½ Hamilton Road, London, Ont.	5 "	10	T. H. Taylor & Co., Chatham	Middlings	10 32	3 92	14 44	5 93	4 14	51 25	35929
"	"	35930	Rowntree & Fougier, 469 Grey St. London, Ont.	5 "	10	J. Sutherland, London	Chop feed	10 06	2 86	11 00	13 30	3 40	59 38	35930
"	"	35931	John Tanton & Son, 143 York St., London, Ont.	5 "	10	Ogilvie Milling Co., Montreal.	Bran.	10 91	4 83	13 63	10 02	6 50	54 11	35931
"	"	35932	R. Hookway, 139 King St., London, Ont.	5 "	10	Hamlyn, Lambeth.	Chop corn.	11 67	4 22	10 31	1 47	1 40	70 93	35932
"	"	35933	Adams & Tanton, 115 King St., London, Ont.	5 "	10	Hunt Bros., London	Middlings	10 60	2 92	13 50	0 67	1 34	61 97	35933
"	"	35934	A. M. Hamilton & Son, 373 Talbot St., London, Ont.	5 "	10	Woodburn Milling Co., Glencoe, Ont.	"	10 78	2 78	12 06	1 00	1 00	72 38	35934
"	"	35935	Marshall & Twitchen, 398 Talbot St., London, Ont.	5 "	10	J. D. Sannby, London	Chop feed	11 57	3 06	11 25	11 58	3 32	59 22	35935
"	"	35936	C. F. Reid, 400 Talbot St., London.	5 "	10	Hunt Bros., London	Middlings	11 20	1 22	13 13	0 54	1 10	72 81	35936



1 GEORGE V., A. 1911

TABLE 1.—STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.							Number of Sample.
				Quantity.	Cents.		Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference.		
DISTRICT OF WINDSOR—Concluded.														
1909								p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
May	3 Stock feeds.	35937	H. Hamlyn, Lambeth . . . . .	5 lbs.	10	H. Hamlyn, London . . . . .	Shorts . . . . .	10.60	3.00	14.50	6.90	2.80	62.20	35937
"	3 "	35938	"	5 "	10	"	Bran. . . . .	10.89	3.41	14.62	9.87	6.20	55.01	35938
"	5 "	35939	J. Campbell Milling Co., St. Thomas.	3 bags		Vendors . . . . .	Chop feed. . . . .	12.32	2.35	10.15	5.78	2.70	66.70	35939
"	5 "	35940	"	3 "		"	Corn chop. . . . .	13.92	1.85	13.87	1.32	1.20	67.84	35940
"	5 "	35941	"	3 "		"	Corn feed . . . . .	9.70	6.97	10.44	3.45	4.28	65.15	35941
"	5 "	35942	D. W. Newcombe, St. Thomas.	5 lbs.	10	Quaker Oats Co., Peterboro. . . . .	Chop feed. . . . .	11.00	2.40	10.06	9.20	3.20	64.14	35942
"	5 "	35943	A. Sutherland . . . . .	5 "	10	J. Campbell Milling Co., St. Thomas.	Middlings. . . . .	9.99	4.50	15.31	5.84	2.24	62.12	35943
"	6 "	35944	B. L. Scott, Ingersoll . . . . .	5 "	10	Unknown. . . . .	"	9.20	4.90	13.56	6.60	3.90	61.81	35944
"	6 "	35945	Grieve & Daniel, Ingersoll.	5 "	10	"	"	10.55	4.29	14.68	5.42	4.24	60.82	35945
"	6 "	35946	H. Patrick, Ingersoll . . . . .	5 "	10	Vendor . . . . .	Chop feed. . . . .	11.97	1.26	9.87	5.48	2.80	68.62	35946
"	6 "	35947	W. Hayes, Ingersoll . . . . .	5 "	10	"	Oat chop. . . . .	10.80	1.95	11.13	11.82	2.70	61.60	35947
"	7 "	35948	Geo. Kirk, Woodstock . . . . .	5 "	10	Ogilvie Milling Co., Manitoba.	Shorts. . . . .	9.35	4.70	15.56	9.75	4.30	56.34	35948
"	7 "	35949	A. Patrick, Woodstock . . . . .	5 "	10	Western Canada Milling Co., Goderich.	Middlings. . . . .	10.29	5.43	16.44	5.92	3.80	58.12	35949
"	7 "	35950	Geo. E. Phillips, Woodstock . . . . .	5 "	10	James Cullen, Woodstock . . . . .	Wheat Chops. . . . .	11.34	2.73	14.00	2.58	2.94	66.41	35950
"	10 "	35951	Gardner Bros., Sarnia. . . . .	5 "	10	Lake of the Woods Milling Co.	Shorts . . . . .	10.75	5.63	17.00	5.20	4.20	57.42	35951
"	10 "	35952	Wm. Johnston, Sarnia . . . . .	5 "	8	King Milling Co., Sarnia . . . . .	Bran. . . . .	11.94	3.42	13.75	9.35	5.86	55.68	35952



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"	10	"	35953	J. A. Crouse, Sarnia	5	"	"	"	10.80	3.47	15.31	5.00	4.40	61.02	35953
"	10	"	35954	Peter Clark, Sarnia	5	"	10	"	13.56	3.42	15.12	4.73	3.34	59.83	35954
"	11	"	35955	R. M. Pincombe, Strathroy	5	"	"	Taylor Milling Co., Chatham.	10.90	5.47	17.31	4.75	4.00	57.57	35955
"	11	"	35956	"	5	"	"	Western Canada Milling Co., Bran*.							35956
"	11	"	35957	S. S. Donaldson, Strathroy	5	"	"	Goderich.	10.25	3.80	12.62	1.00	1.30	71.03	35957
"	11	"	35958	"	5	"	"	Vendor	11.77	1.72	13.75	9.43	5.60	57.73	35958
"	11	"	35959	H. J. Glanville, London	5	"	10	Mr. Hawkins, St. Johns	11.07	3.61	14.44	9.87	5.64	55.37	35959

DISTRICT OF MANITOBA—A. C. LARIVIERE, INSPECTOR.

May	6	Stock feeds.	39701	Coyle Bros., North Winnipeg	5 lbs.	10	Lake of the Woods Milling Co., Keewatin.	10.00	4.05	14.88	7.80	5.38	57.89	39701
"	6	"	39702	L. Ginsberg, Winnipeg	5	10	"	9.95	3.60	15.00	13.00	4.24	54.21	39702
"	8	"	39703	The Carnfac Stock Food Co., Winnipeg	5	"	"	10.50	4.46	14.00	9.80	5.70	55.54	39703
"	10	"	39704	Callin Bros., St. Boniface	5	10	The Western Canada Flour Mills Co., St. Boniface.	10.92	3.67	14.81	9.99	5.74	51.87	39704
"	12	"	39705	Laing Bros., Winnipeg	5	10	"	11.00	4.33	14.94	9.16	5.61	54.93	39705
"	17	"	39706	Lake of the Woods Milling Co., Portage La Prairie	5	"	Vendors	10.84	3.06	13.50	10.39	6.06	56.15	39706
"	18	"	39707	R. Purdon	5	10	The Western Canada Flour Mills Co., Brandon.	10.65	3.80	14.25	10.23	5.90	55.17	39707
"	18	"	39708	The Maple Leaf Flour Mills Co., Brandon.	5	"	Vendors	11.46	2.46	15.68	10.22	5.90	54.28	39708
"	20	"	39709	Geo. McCulloch & Sons, Souris	5	"	"	11.72	5.34	15.06	9.37	4.88	53.63	39709
"	22	"	39710	W. Epstein, Selkirk	5	10	Lake of the Woods Milling Co., Keewatin.	10.56	3.16	14.81	11.53	5.98	53.96	39710
"	6	"	39711	Wm. Crawford, Elmwood, P. O., Winnipeg	5	10	"	10.55	5.32	14.87	7.45	3.50	58.31	39711
"	7	"	39712	J. J. Darling, Winnipeg	5	10	The Maple Leaf Flour Mills Co., Brandon.	10.07	4.41	16.00	6.80	4.40	58.32	39712
"	10	"	39713	Pelletier & Co., St. Boniface	5	10	The Western Canada Flour Mills Co., St. Boniface.	10.24	5.35	16.44	6.46	4.20	57.31	39713
"	12	"	39714	Lake of the Woods Milling Co., Winnipeg	5	"	Vendors, Keewatin	10.21	5.72	16.87	6.72	4.30	56.18	39714
"	17	"	39715	G. C. Hall, Portage La Prairie	5	10	Lake of the Woods Milling Co., Portage La Prairie.	10.38	4.12	14.50	8.06	3.74	59.20	39715

\*Sample lost.



TABLE I--STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion).	RESULTS OF ANALYSIS.						Number of Sample.
				Quantity.	Cent.			Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference	
DISTRICT OF MANITOBA—Concluded.														
1909.														
May 17	Stock feeds	39716	Shaws Flour & Feed, Portage La Prairie.	10	5 lbs.	10	The Western Canada Flour Mills Co., St. Boniface.	9.83	4.42	16.25	6.38	4.18	58.94	39716
" 17	"	39717	Lake of the Woods Milling Co., Portage La Prairie.	"	5 "	"	Vendors	10.37	5.01	14.85	7.55	4.14	58.08	39717
" 18	"	39718	Rae & Co., Brandon.	10	5 "	10	The Western Canada Flour Mills Co., Brandon.	11.09	3.40	15.75	5.02	3.88	60.86	39718
" 18	"	39719	The Maple Leaf Flour Mills Co., Brandon.	"	5 "	"	Vendors	11.62	3.08	16.81	5.67	4.08	56.74	39719
" 20	"	39720	Geo. McCulloch & Sons, Souris.	"	5 "	"	"	10.87	3.81	15.75	5.16	3.54	60.87	39720
" 6	"	39721	Laing Bros., Winnipeg.	10	5 "	10	Unknown	10.15	2.80	12.88	11.95	2.28	59.94	39721
" 7	"	39722	Olafson & Sveinson, Winnipeg.	"	5 "	"	The Western Canada Flour Mills Co., St. Boniface.	10.75	0.95	11.25	1.25	0.90	74.10	39722
" 10	"	39723	The West Canada Flour Mills Co., St. Boniface.	"	5 "	"	Vendors	10.44	5.93	16.69	5.61	4.14	57.19	39723
" 11	"	39724	Ogilvie Flour Mills, Winnipeg.	"	5 "	"	Vendors	8.35	3.50	16.38	7.35	3.90	60.52	39724
" 6	"	39731	Medovy & Levitt, Winnipeg.	10	5 "	10	"	10.50	2.90	10.50	7.90	2.48	65.72	39731
" 6	"	39732	Spratt Bros., Elmwood P.O., Winnipeg.	"	5 "	10	The West. Canada Flour Mills Co., St. Boniface.	3.05	4.50	11.75	12.20	2.60	65.90	39732
" 7	"	39733	A. & E. Currie, Winnipeg.	"	5 "	10	The Anchor Elevator Co., Winnipeg.	10.05	4.12	13.67	12.21	2.34	57.61	39733
" 7	"	39734	P. Flodden & Co., Winnipeg.	"	5 "	10	Unknown	10.32	4.94	11.56	10.06	3.00	60.12	39734
" 7	"	39735	Raynsford & Co.	"	5 "	10	Raynsford & Co., Grand view, Man.	10.60	2.45	11.31	8.65	2.56	64.43	39735
" 7	"	39736	Wilton Bros., Winnipeg.	"	5 "	10	Vendors	10.40	3.83	10.31	12.26	3.34	59.86	39736
" 8	"	39737	Laing Bros., Winnipeg.	"	5 "	10	The West. Canada Flour Mills Co., St. Boniface.	10.25	3.85	10.50	10.10	3.10	62.20	39737



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" 10	"	39738	The West. Canada Flour Mills Co., St. Boniface.	10	Vendors	"	10.50	2.05	10.75	9.30	2.80	64.60	39738
" 11	"	39739	Ogilvie Flour Mills Co., Winnipeg.	10	"	"	10.25	3.97	15.68	5.67	4.58	59.85	39739

## DISTRICT OF CALGARY R. W. FLETCHER, INSPECTOR.

May 21	Stock feeds	35533	Erb & Anderson, Calgary	5 lbs.	10	Medicine Hat Milling Co., Medicine Hat.	Bran.	10.17	2.30	16.63	9.16	4.40	57.34	35533
" 21	"	35534	Genter & Smith, Calgary	5 "	10	Lethbridge Roller Mill, Lethbridge.	"	8.70	4.40	17.56	7.30	5.24	56.80	35534
" 21	"	35535	T. Fletcher, Calgary	5 "	10	West. Canada Flour Mills Co., Winnipeg.	"	10.65	2.54	14.69	10.02	5.94	56.16	35535
" 21	"	35536	Jesse Gouge, Calgary	5 "	10	Western Milling Co., Calgary.	"	9.30	3.55	13.50	10.40	5.84	57.41	35536
" 26	"	35537	J. E. Love, Calgary	5 "	10	"	"	9.85	2.50	13.75	10.00	5.00	58.90	35537
" 28	"	35538	S. T. Fawcett, Medicine Hat.	5 "	10	Lake of the Woods Milling Co., Portage la Prairie.	"	9.45	4.00	15.50	10.15	5.70	55.20	35538
" 28	"	35539	Medicine Hat Milling Co., Medicine Hat.	5 "	10	Vendors	"	10.82	3.04	14.88	8.46	5.10	57.70	35539
June 1	"	35540	Hegler & Hegler, Edmonton.	5 "	10	Campbell & Ottiwell, Edmonton.	"	10.20	3.58	14.63	8.48	4.50	58.61	35540
" 1	"	35541	Hamilton & Son, Edmonton.	5 "	10	Alberta Milling Co., Edmonton.	"	8.05	3.70	13.19	7.15	5.44	62.47	35541
" 1	"	35542	"	5 "	10	Campbell & Ottiwell, Edmonton.	"	9.15	3.00	14.00	8.40	5.00	60.45	35542
May 21	"	35543	Erb & Anderson, Calgary	5 "	10	Medicine Hat Milling Co., Medicine Hat.	Shorts.	9.90	4.20	16.38	6.10	3.44	59.98	35543
" 21	"	35544	Genter & Smith, Calgary	5 "	10	Taylor Mill & Elevator Co., Lethbridge.	"	9.60	3.70	16.44	6.45	3.38	60.43	35544
" 21	"	35545	T. Fletcher, Calgary	5 "	10	West. Canada Flour Mills Co., Winnipeg.	"	8.40	4.85	17.31	5.25	4.04	60.15	35545
" 21	"	35546	Jesse Gouge, Calgary	5 "	10	Western Milling Co., Calgary	"	10.76	2.75	14.88	4.28	3.36	63.97	35546
" 26	"	35547	J. E. Love	5 "	10	Lethbridge Milling Co., Lethbridge.	"	10.78	3.53	15.50	3.90	3.38	62.91	35547
" 28	"	35548	S. T. Fawcett, Med. Hat	5 "	10	Calgary Milling Co., Calgary	"	"	"	"	"	"	"	35548
" 28	"	35549	Med. Hat Milling Co	5 "	10	Vendors	"	10.15	3.87	15.56	4.21	3.34	62.87	35549
June 1	"	35550	Potter & McDougall, Edmonton.	5 "	10	Alberta Milling Co., Edmonton.	"	10.88	3.45	15.38	3.89	2.94	63.71	35550
" 1	"	35551	Hegler & Hegler, Edmonton.	5 "	10	Campbell & Ottiwell, Edmonton.	"	10.64	3.94	15.38	5.60	4.26	60.18	35551
" 1	"	35552	Antin & Markham	5 "	10	Alberta Milling Co., Edmonton.	"	9.40	4.25	14.81	5.65	3.14	62.75	35552
May 21	"	35563	Erb & Anderson, Calgary	5 "	10	Unknown	Barley chop	11.36	0.97	10.00	4.77	2.34	70.56	35563

\*Sample lost.



TABLE I.—STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Samples.	Name and address of Vendor.		Cost.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion.)	RESULTS OF ANALYSIS.							Number of Samples.
			Quantity.	(Cents.)				Moisture.	Fat, (linoleic).	Proteids.	Crude Fibre.	Ash.	Difference.		
DISTRICT OF CALGARY—Concluded.															
1909								p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
May 21	Stock feeds	35564	Genter & Smith	Calgary, 5 lbs.	10	Brackman & Ker, Calgary	Oat chop	10 49	3 75	10 56	12 37	3 14	59 78	35564	
" 21	"	35565	T. Fletcher	" 5 "	10	"	"	9 25	2 85	11 75	11 40	2 84	61 91	35565	
" 21	"	35566	Jesse Gouge	" 5 "	10	Vendors	"	10 31	1 39	9 63	11 49	3 34	60 84	35566	
" 26	"	35567	J. E. Love	" 5 "	10	Brakman & Kerr Milling Barley Co., Calgary	"	11 40	1 00	11 81	4 75	2 18	68 86	35567	
" 28	"	35568	Med. Hat Milling Co., Med. Hat	5 "	10	Vendors	Oat	10 48	4 33	11 75	9 00	3 00	61 44	35568	
" 28	"	35569	S. T. Fawcett, Med. Hat	5 "	10	"	Barley	11 07	3 67	11 00	5 96	2 55	65 74	35569	
June 1	"	35570	Potter & McDougall, Edmonton.	5 "	10	"	Flaked oats	11 12	3 77	11 13	11 00	3 10	59 88	35570	
" 1	"	35571	Hegler & Hegler, Edmonton.	5 "	10	"	Barley chop	11 20	0 98	10 13	5 22	2 44	70 03	35571	
" 1	"	35572	Antin & Markham	5 "	10	"	Oat	9 25	3 35	10 50	8 45	3 29	65 25	35572	
DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR.															
April 29	Stock feed	37636	Hall Bros, New Westminster.	West 5 lbs.	15	Calgary Milling Co., Calgary	Bran	10 89	4 93	13 38	10 02	5 24	55 54	37636	
" 29	"	37637	McQuarrie & Co., New Westminster.	5 "	15	Unknown	"	9 80	3 45	12 81	11 70	1 74	57 50	37637	
May 3	"	37638	Allen's Feed Store, Vancouver.	Van 5 "	15	Vancouver Milling Co., Vancouver.	"	10 20	3 50	11 19	5 70	4 72	61 69	37638	



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"	3	"	"	37639	Brown & Howey, Vancouver 5 lbs.	15	Saskatoon Flour Mills.	"	"	10 54	3 70	15 56	9 17	6 10	54 63	37639
"	3	"	"	37640	Vancouver Milling Co., 5 "	15	Vendors.	"	"	10 65	4 58	13 38	9 56	1 90	56 93	37640
"	3	"	"	37641	Henry Holtz, Vancouver 5 "	15	Vendor.	"	"	11 47	3 12	14 88	9 22	4 66	56 65	37641
"	1	"	"	37642	Calgary Milling Co., Van- 5 "	15	Vendors	"	"	9 85	4 15	13 81	7 60	5 48	59 11	37642
"	4	"	"	37643	J. Mitchell, Vancouver 5 "	15	Calgary Milling Co., Van- couer.	"	"	10 50	5 10	14 37	9 48	5 10	55 45	37643
"	4	"	"	37644	S. W. Keith, Vancouver 5 "	15	Vancouver Milling Co., "	"	"	10 55	4 25	13 38	9 93	5 40	56 49	37644
"	7	"	"	37645	Fox Bros., Vancouver 5 "	15	Western Milling Co., Cal- gary.	"	"	9 80	4 00	16 19	6 55	4 90	58 56	37645
April 29	"	"	"	37646	Hall Bros., New Westminster. 5 "	15	Calgary Milling Co., Van- couer.	"	"	10 86	5 21	16 25	5 09	3 80	58 79	37646
"	29	"	"	37647	McQuarrie & Co., New Westminster. 5 "	15	Unknown	"	"	10 21	6 53	16 81	8 75	3 76	53 91	37647
May 3	3	"	"	37648	Allen's Feed Store, Vancouver 5 "	15	Esterbrooke Milling Co., Eburne.	"	"	9 35	3 65	13 94	6 20	3 74	63 12	37648
"	3	"	"	37649	Brown & Howey, Vancouver 5 "	15	Ellison Milling Co., Alberta	"	"	10 00	2 35	14 69	5 00	3 18	64 78	37649
"	3	"	"	37650	Vancouver Milling Co., 5 "	15	Vendors.	"	"	11 01	3 49	15 06	6 15	3 60	60 69	37650
"	3	"	"	37651	Henry Holtz, Vancouver 5 "	15	Vendor.	"	"	10 81	3 65	14 69	5 26	3 60	61 95	37651
"	4	"	"	37652	Calgary Milling Co., Van 5 "	15	Vendors.	"	"	10 30	1 60	15 31	4 60	3 42	64 77	37652
"	1	"	"	37653	J. Mitchell, Vancouver. 5 "	15	Calgary Milling Co., Van- couer.	"	"	11 00	5 14	14 50	4 78	2 80	61 78	37653
"	1	"	"	37654	S. W. Keith, Vancouver 5 "	15	Ogilvie Milling Co.	"	"	10 36	4 35	16 18	7 66	4 70	56 75	37654
"	7	"	"	37655	Fox Bros., Vancouver 5 "	15	Western Milling Co	"	"	10 40	3 85	14 25	10 75	2 70	58 05	37655
April 29	"	"	"	37656	McQuarrie & Co., New Westminster. 5 "	15	Esterbrooke Milling Co., Middlings Eburne.	"	"	"	"	"	"	"	"	37656
May 3	3	"	"	37657	Vancouver Milling Co., 5 "	15	Vendors.	"	"	9 90	1 80	13 06	4 30	2 10	68 84	37657
"	4	"	"	37658	Calgary Milling Co., Van- 5 "	15	"	"	"	10 29	6 88	14 28	2 76	1 84	63 95	37658
"	4	"	"	37659	Brown & Howey, Vancouver 5 "	15	City Flour Mills, Edmonton	"	"	11 65	2 45	12 00	6 55	0 88	66 47	37659
"	7	"	"	37660	Brackman Ker M. Co., Van- 5 "	15	Campbell Ottiwell Co., Ed- monton.	"	"	10 58	3 36	13 50	1 59	2 10	63 87	37660
"	12	"	"	37661	W. H. Walsh, Vancouver 5 "	15	Vancouver Milling Co., Vancouver.	"	"	11 60	2 35	11 19	2 40	1 20	71 26	37661
"	14	"	"	37662	Brown & Howey, Vancouver 5 "	15	City Flour Mills, Edmonton	"	"	10 35	1 60	11 56	4 85	1 78	69 86	37662
"	14	"	"	37663	W. H. Walsh, Vancouver 5 "	15	Unknown.	"	"	10 26	2 15	13 50	7 20	2 10	64 85	37663

Sample lost.



TABLE I—STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Inspector's Report, (Is not an expression of Opinion.)	RESULTS OF ANALYSIS.							Number of Sample.
				Quantity.	Cents.		Moisture.	Fat. (Indirect.	Proteids.	Crude Fibre.	Ash.	Difference		
DISTRICT OF VANCOUVER—Concluded.														
1909.	7	Stock feeds.	37666 Fox Bros., Vancouver.	5 lbs.	15	Pacific Grain Co., Vancouver	Chop feed.	Oats.	p. c.	p. c.	p. c.	p. c.	p. c.	37666
"	7	"	37667 Brown & Howey, Vancouver	5 "	15	Vendors.	Chop feed.	Common.	10.82	9.85	3.08	10.69	9.85	37667
"	11	"	37668 J. Mitchell, Vancouver.	5 "	15	Unknown.	Chicken chop.		11.49	8.26	3.37	10.13	8.26	37668
"	11	"	37669 S. W. Keith, Vancouver.	5 "	15	Vendor.	"		9.65	5.39	2.65	13.31	5.39	37669
"	11	"	37670 Brackman-Ker, North Vancouver.	5 "	15	Vendors.	Common chop.		9.60	7.50	2.00	12.69	7.50	37670
"	12	"	37671 W. H. Walsh, Vancouver.	5 "	15	Brackman-Ker, Vancouver.	Oat chop.		9.00	10.25	2.15	9.19	10.25	37671
"	12	"	37672 Webster Bros., Vancouver.	5 "	15	Brown & Howey, Vancouver	Excelsior chop.		10.59	8.25	3.10	10.88	7.88	37672
"	13	"	37673 Calgary Milling Co., Vancouver.	5 "	15	Vendors.	Barley chop.		11.36	5.87	2.03	11.12	5.87	37673
"	13	"	37674 S. T. Wallace, Vancouver.	5 "	15	Brackman Ker, Vancouver.	Wheat chop.		9.60	2.60	2.10	12.19	2.60	37674
"	13	"	37675 Vancouver Milling Co., Vancouver.	5 "	15	Vendors.	No. 1 chop.		10.85	8.00	2.20	11.19	8.00	37675
DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.														
June	4	Stock feeds.	39366 Brackman-Ker Milling Co., Vancouver.	5 lbs.	10	Calgary Milling Co., Calgary	Shorts.		11.49	4.11	2.32	13.88	4.11	39366
"	4	"	39367 "	5 "	10	Med. Hat Milling Co., Med. Hat.	"		11.00	4.70	4.10	18.18	4.70	39367
"	4	"	39368 "	5 "	10	Columbia Flouring Mills, Enderby.	"		11.16	6.34	3.18	17.50	6.34	39368



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"	4	"	39369	"	"	..5	"	10	The Vancouver Milling & Grain Co., Vancouver.	"	11.57	4.76	15.31	5.48	3.68	59.20	39369
"	4	"	39370	"	"	..5	"	10	Ogilvie Milling Co., Winnipeg.	Bran	11.49	4.41	14.44	10.03	6.60	53.03	39370
"	4	"	39371	"	"	..5	"	10	Western Canada Flour Mills Co. Ltd., Winnipeg.	"	9.05	4.00	14.50	9.70	6.00	56.75	39371
"	4	"	39372	"	"	..5	"	10	Lake of the Woods Milling Co., Lake of the Woods.	"	11.06	3.86	14.50	9.46	5.50	55.62	39372
"	4	"	39373	"	"	..5	"	10	Calgary Milling Co., Calgary	"	11.29	3.57	13.94	8.85	4.68	57.67	39373
"	4	"	39374	"	"	..5	"	15	Columbia Flouring Mills, Enderby.	Middlings	9.85	5.13	15.06	4.02	2.90	63.04	39374
"	4	"	39375	"	"	..5	"	15	Calgary Milling Co., Calgary	"	10.54	2.79	13.31	6.42	2.00	64.94	39375
"	4	"	39376	"	"	..5	"	10	Brackman-Ker Milling Co., Victoria, B.C.	Chop feed	8.19	4.02	8.81	19.39	4.88	56.71	39376
"	4	"	39377	Brackman Ker Milling Co., Victoria, B.C.	"	..5	"	5	Vendors	Chop feed	10.54	3.50	8.75	12.55	3.80	60.86	39377
"	7	"	39378	Sylvester Feed Co., B.C.	Victoria, B.C.	..5	"	10	Moosejaw Milling Co., Moose Jaw.	Bran	11.10	4.55	15.94	8.00	5.90	54.51	39378
"	7	"	39379	"	"	..5	"	10	"	Shorts	11.08	4.24	14.00	4.46	4.74	61.48	39379
"	7	"	39380	"	"	..5	"	5	Vendors	Chop feed	10.84	2.26	10.94	7.67	5.89	62.49	39380
"	7	"	39381	Geo. N. Gowen,	Victoria,	..5	"	10	Ogilvie Flour Mills, Winnipeg.	Bran	11.49	5.15	13.75	10.26	6.20	53.15	39381
"	7	"	39382	"	"	..5	"	10	"	Shorts	10.07	4.63	16.13	7.35	4.14	57.68	39382
"	7	"	39383	"	"	..5	"	10	Columbia Flour Mills, Enderby.	"	10.25	4.29	15.31	6.03	4.24	59.88	39383
"	7	"	39384	"	"	..5	"	10	Brackman-Ker Milling Co., Victoria.	Corn chop feed	9.60	2.10	9.25	11.00	3.60	63.85	39384
"	8	"	39385	Scott & Peden,	Victoria	..5	"	5	Raymond Milling & Elevator Co., Ltd., Raymond, Alta.	Bran	8.20	3.90	14.63	7.10	4.60	61.57	39385
"	8	"	39386	"	"	..5	"	10	"	Shorts	8.05	3.75	15.75	5.15	3.40	63.90	39386
"	8	"	39387	"	"	..5	"	10	"	Middlings	9.00	3.95	14.69	7.95	2.40	62.01	39387
"	8	"	39388	"	"	..5	"	10	Ogilvie Milling Co., Winnipeg.	Oat meal chop feed.	8.60	2.95	6.63	18.85	6.70	56.27	39388
"	9	"	39389	Bannerman & Horne,	Victoria,	..5	"	10	Saskatchewan Flour Mills Co., Moosejaw, Sask.	Bran	8.10	4.35	15.94	8.35	6.00	57.26	39389
"	9	"	39390	"	"	..5	"	10	"	Shorts	11.32	4.64	17.13	4.75	3.80	58.36	39390
"	9	"	39391	"	"	..5	"	10	Columbia Flouring Mills, Enderby.	Middlings	10.02	4.20	14.14	4.35	3.00	63.99	39391
"	9	"	39392	"	"	..5	"	10	Vendors	Chop feed	11.17	3.32	12.00	7.14	3.06	63.71	39392
"	9	"	39393	John's Bros.,	Victoria	..5	"	10	Bannerman & Horne, Victoria.	Bran	11.50	4.00	16.56	8.15	5.70	54.09	39393



TABLE I—STOCK FEEDS.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Inspector's Report. (If not an expression of Opinion.)	RESULTS OF ANALYSIS.							
				Quantity.	Cents.		Moisture.	Fat. (Indirect.)	Proteids.	Crude Fibre.	Ash.	Difference.		
DISTRICT OF VICTORIA—Concluded.														
1909.														
June	9 Stock feeds.	39394	John's Bros., Victoria.	5 lbs.	10	Ellison Milling & Elevator Shorts.	10.54	3.76	14.50	4.53	2.70	63.95	39394	
"	"	39395	"	5 "	5	Co. Ltd., Raymond, Leth Brackman-Ker Milling Co., (Chop feed.	9.35	2.15	19.56	9.70	3.76	64.48	39395	
"	"	39396	T. Redding, Victoria.	5 "	15	Victoria, B.C. Columbia Flouring Mills, Middlings	10.91	3.56	12.50	1.57	1.60	69.86	39396	
"	"	39397	Popham Bros	5 "	10	Enderby. T. Redding, Victoria, B. C.	11.36	2.45	14.25	1.84	1.60	68.50	39397	
"	"	39398	R. P. Ruthet & Co., Victoria	5 "	10	Columbia Flouring Mills, Bran.	11.03	9.52	14.25	9.74	5.40	50.06	39398	
"	"	39399	"	5 "	5	"	11.25	3.31	13.12	6.76	3.31	62.22	39399	
"	"	39400	"	5 "	10	"	11.00	3.06	13.63	2.52	2.14	67.65	39400	



SESSIONAL PAPER No. 14

TABLE II—BRAN.

Serial Number.	Number of Sample.	Remarks.	Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference.	
			p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
1	33841		10.59	4.53	14.41	9.08	5.86	55.50	Nova Scotia.
2	33843		10.93	3.12	14.25	11.05	3.92	56.73	
3	33844		10.78	3.55	16.25	9.86	5.76	53.80	
4	33845		9.40	3.90	15.69	10.00	5.46	55.55	
5	33846		10.90	3.60	14.19	9.38	5.60	56.33	
6	33847		9.60	4.25	14.88	11.25	5.16	54.86	
7	33848		11.61	2.75	15.50	8.49	5.34	56.31	
8	33849		10.80	2.36	13.81	10.84	5.28	56.91	
9	33850		11.06	4.80	14.88	9.38	5.64	54.24	
10	33860		11.01	3.71	14.69	9.72	5.90	57.97	P. E. Islan
11	38521		10.39	3.84	14.06	9.64	6.00	56.07	
12	38522		10.74	3.80	15.12	9.74	5.84	54.76	
13	38523		11.59	1.86	14.00	8.17	5.16	59.22	
14	38524		10.61	3.24	13.56	8.70	6.24	57.65	
15	38525		10.60	3.80	14.28	10.06	6.20	55.06	
16	38526		10.86	4.33	15.56	8.29	5.36	55.60	
17	38527		11.30	3.25	12.69	11.35	5.84	55.57	
18	38528		11.58	1.42	13.56	9.46	5.94	58.04	
19	38529		12.59	3.69	14.25	6.77	5.00	57.70	New Brunswick
20	38530		12.91	4.18	14.50	5.88	5.10	57.43	
21	29954		10.30	3.55	14.50	8.17	5.34	58.14	
22	29955		7.90	4.40	13.87	12.15	5.30	56.38	
23	29956		11.15	5.30	13.31	8.79	5.80	55.65	
24	29957		10.61	4.52	15.31	10.55	5.68	53.33	
25	29958		12.29	4.03	14.50	9.80	5.20	54.18	
26	29959		11.79	3.08	13.75	8.68	5.60	57.10	
27	29960		13.37	3.90	13.81	9.08	5.70	54.14	
28	29961		12.89	2.90	12.31	9.90	5.90	56.10	Quebec.
29	29962		11.80	3.03	13.87	10.43	6.10	54.77	
30	29963		12.16	3.85	14.87	8.47	5.64	55.01	
31	36732		10.94	3.78	15.94	7.47	4.68	57.19	
32	36733		10.57	4.96	15.13	8.65	5.64	55.05	
33	36734		10.89	6.06	15.25	7.97	5.74	54.09	
34	36735		10.81	7.05	14.81	8.96	5.60	55.75	
35	36736		10.20	4.00	14.63	7.70	5.88	57.59	
36	36737		9.25	3.90	14.88	8.45	6.00	57.52	St. Hyacinthe.
37	36738		10.81	2.96	14.62	8.96	6.16	56.49	
38	36739		10.91	4.42	15.25	8.56	5.80	55.06	
39	36740		10.74	4.37	14.81	9.42	5.54	55.12	
40	36741		10.61	4.15	15.75	6.23	4.24	59.02	
41	38801		10.33	3.92	14.81	9.88	5.88	55.18	
42	38802		9.66	3.46	14.81	8.73	5.44	57.90	
43	38803		10.94	5.54	15.56	9.40	5.84	52.72	
44	38804		10.40	3.70	14.37	11.90	4.60	55.03	Montreal.
45	38805		12.32	4.10	15.75	7.93	5.28	54.62	
46	38806		12.23	3.68	15.81	8.82	7.16	52.30	
47	38807		10.24	6.93	15.31	9.19	5.40	52.93	
48	38808		10.20	5.51	15.56	8.47	5.44	54.82	
49	38809		11.09	3.75	12.69	12.67	5.10	54.70	
50	38810		13.09	3.06	14.62	8.75	5.18	55.30	
51	40202		11.72	4.00	14.06	9.01	4.74	56.47	
52	40203		11.61	4.25	14.62	8.80	5.48	55.24	Ottawa.
53	40204		12.67	4.27	16.19	8.05	5.14	53.68	
54	40205		10.58	3.93	15.56	7.73	5.38	56.82	
55	40206		11.41	4.07	15.12	9.26	5.60	54.51	
56	40207		12.31	4.73	14.81	9.78	5.50	52.87	
57	40208		11.76	5.33	15.25	8.90	5.40	58.36	
58	40209		10.25	4.33	13.62	10.21	6.40	55.19	
59	40210		12.30	3.65	14.50	9.87	5.90	53.78	
60	40211		11.74	3.39	15.06	8.63	5.46	55.72	Ottawa.
61	41201		10.53	3.05	15.13	7.88	5.44	57.97	
62	41202		10.49	5.46	14.88	8.34	5.24	55.59	
63	41203		11.49	3.29	15.56	8.94	5.40	55.32	



TABLE II -BRAN.

Serial Number.	Number of Sample.	Remarks.	Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference.	
			p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
64	41204		9.85	2.30	15.38	12.30	5.90	54.27	Ottawa.
65	41205		10.36	2.22	14.25	11.17	5.64	56.36	
66	41206		10.87	3.64	14.19	9.04	5.74	56.52	
67	41207		9.50	4.70	14.94	11.65	5.84	53.37	
68	41208		10.04	3.41	14.44	8.89	5.34	57.88	
69	41209		10.98	3.09	14.38	9.78	5.04	56.73	
70	41210		9.40	4.30	14.50	10.90	6.00	54.90	
71	41101		10.68	5.55	14.38	9.42	5.50	54.47	Kingston.
72	41102		10.57	4.83	15.31	8.55	5.44	55.30	
73	41103		10.71	4.47	13.06	10.22	5.50	56.04	
74	41104		10.82	4.91	14.00	10.08	6.26	53.93	
75	41105		11.22	4.33	15.25	7.92	5.48	55.80	
76	41106		8.60	4.45	15.31	10.55	5.40	55.69	
77	41107		10.93	3.06	15.25	8.72	5.24	56.80	
78	41108		10.64	3.74	15.06	8.96	5.96	55.64	
79	41109		11.14	4.39	13.06	10.04	6.88	54.49	
80	41110		9.75	3.75	12.69	11.55	6.50	55.76	
81	36264		11.10	3.08	13.75	9.13	6.30	56.64	Toronto.
82	36265		10.05	4.37	13.87	12.21	6.20	53.30	
83	36266		12.45	3.90	14.37	9.60	4.50	55.18	
84	36267		11.20	3.85	14.00	10.95	4.60	55.40	
85	36268		11.51	3.47	13.50	8.73	5.54	64.25	
86	36269		11.12	3.16	14.69	10.38	6.10	54.55	
87	36270		11.39	3.95	16.00	8.48	5.10	55.08	
88	36271		9.80	4.40	14.94	8.00	4.90	57.96	
89	36272		12.72	2.11	13.56	9.92	5.84	55.85	
90	36273		12.47	1.93	13.43	10.84	5.64	55.69	
91	30651		10.58	2.89	15.06	10.02	5.60	55.85	London.
92	30656		10.16	3.59	14.81	9.18	5.40	56.86	
93	30659		10.49	4.01	14.62	9.36	5.72	55.80	
94	30662		10.10	3.96	14.69	3.96	3.16	64.13	
95	30663		10.82	2.83	14.06	8.75	5.60	57.94	
96	30666		10.86	3.01	11.81	13.20	5.80	55.32	
97	30667		9.60	4.25	14.63	8.55	5.80	57.17	
98	30671		11.49	5.10	13.94	9.43	6.74	53.30	
99	30674		9.25	3.00	14.19	8.15	6.10	59.31	
100	35921		9.88	4.71	15.12	10.33	6.20	53.76	Windsor.
101	35924		10.22	4.86	15.75	8.91	5.80	54.46	
102	25926		10.11	4.16	14.94	9.38	5.24	56.17	
103	35931		10.91	4.83	13.63	10.02	6.50	54.11	
104	35938		10.89	3.41	14.62	9.87	6.20	55.01	
105	35952		11.94	3.42	13.75	9.35	5.86	55.68	
106	35956								
107	35958		11.77	1.72	13.75	9.43	5.60	57.73	
108	35959		11.07	3.61	14.44	9.87	5.64	55.37	
109	39701		10.00	4.05	14.88	7.80	5.38	57.89	Manitoba.
110	39702		9.95	3.60	15.00	13.00	4.24	54.21	
111	39703		10.50	4.46	14.00	9.80	5.70	55.54	
112	39704		10.92	3.67	14.81	9.99	5.74	54.87	
113	39705		11.00	4.33	14.94	9.16	5.64	54.93	
114	39706		10.84	3.06	13.50	10.39	6.06	56.15	
115	39707		10.65	3.80	14.25	10.23	5.90	55.17	
116	39708		11.46	2.46	15.68	10.22	5.90	54.28	
117	39709		11.72	5.34	15.06	9.37	4.88	53.63	
118	39710		10.56	3.16	14.81	11.53	5.98	53.96	
119	35533		10.17	2.30	16.63	9.16	4.40	57.34	Calgary.
120	35534		8.70	4.40	17.56	7.30	5.24	56.80	
121	35535		10.65	2.54	14.69	10.02	5.94	56.16	
122	35536		9.30	3.55	13.50	10.40	5.84	57.41	
123	35537		9.85	2.50	13.75	10.00	5.00	58.90	
124	35538		9.45	4.00	15.50	10.15	5.70	55.20	
125	35539		10.82	3.04	14.88	8.46	5.10	57.70	
126	35540		10.20	3.58	14.63	8.48	4.50	58.61	
127	35541		8.05	3.70	13.19	7.15	5.44	62.47	
128	35542		9.15	3.00	14.00	8.40	5.00	60.45	



SESSIONAL PAPER No. 14

TABLE II—BRAN.

Serial Number.	Number of Sample.	Remarks.	Moisture.	Fat (Indirect.)	Proteids.	Crude Fibre.	Ash.	Difference.	
			p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
129	37636		10.89	4.93	13.38	10.02	5.24	55.54	Vancouver.
130	37637		9.80	3.45	12.81	11.70	4.74	57.50	
131	37638		10.20	3.50	14.19	5.70	4.72	61.69	
132	37639		10.54	3.70	15.56	9.47	6.10	54.63	
133	37640		10.65	4.58	13.38	9.56	4.90	56.93	
134	37641		11.47	3.12	14.88	9.22	4.66	56.65	
135	37642		9.85	4.15	13.81	7.60	5.48	59.11	
136	37643		10.50	5.10	14.37	9.48	5.10	55.45	
137	37644		10.55	4.25	13.38	9.93	5.40	56.49	
138	37645		9.80	4.00	16.19	6.55	4.90	58.56	Victoria.
139	39370		11.49	4.41	14.44	10.03	6.60	53.03	
140	39371		9.05	4.00	14.50	9.70	6.00	56.75	
141	39372		11.06	3.86	14.50	9.46	5.50	55.62	
142	39373		11.29	3.57	13.94	8.85	4.68	57.57	
143	39378		11.10	4.55	15.94	8.00	5.90	54.51	
144	39381		11.49	5.15	13.75	10.26	6.20	53.15	
145	39385		8.20	3.90	14.63	7.10	4.60	61.57	
146	39389		8.10	4.35	15.94	8.35	6.00	57.26	
147	39393		11.50	4.00	16.56	8.15	5.70	54.09	
148	39398		11.03	9.52	14.25	9.74	5.40	50.06	
148	Samples.	Means. ....	10.69	3.92	14.67	9.26	5.53	56.01	
		Maximums. .	13.37	9.52	17.56	13.20	7.16	64.25	
		Minimums. ....	7.90	1.42	11.81	3.96	3.16	50.06	



TABLE III.—MIDDLINGS OR SHORTS.

Serial Number.	Number of Sample.	Remarks.	Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference.	
			p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	
1	33842		9.05	3.50	16.19	10.55	4.16	56.55	Nova Scotia .... Middlings.
2	33851		10.35	3.98	14.94	5.87	4.40	60.46	"
3	33852		11.00	3.39	16.00	7.20	3.90	58.51	"
4	33853		11.15	3.09	14.19	6.43	4.40	60.74	"
5	33854		10.47	4.03	15.06	6.37	4.36	59.71	"
6	33855		11.17	4.46	14.38	5.47	4.00	60.52	"
7	33856		10.78	4.40	15.12	6.04	4.74	58.92	"
8	33857		11.02	4.31	15.56	5.36	4.20	59.55	"
9	33858		10.56	3.58	13.38	4.38	3.50	64.60	"
10	33859		10.40	3.66	15.31	7.04	4.28	59.31	"
11	33861		10.80	4.75	16.31	7.19	4.86	56.09	Sh r s.
12	33862		10.73	4.39	14.88	5.47	4.10	60.43	"
13	33863		11.25	4.67	14.94	6.35	3.92	58.87	"
14	33864		10.98	5.10	15.81	7.37	4.10	56.64	"
15	33865		11.37	4.82	14.88	5.80	3.98	59.15	"
16	33866		11.15	4.82	14.06	7.45	4.88	57.64	"
17	33867		10.02	5.16	16.25	6.11	5.50	56.96	"
18	33868		10.36	3.84	14.88	5.95	4.48	60.49	"
19	33869		10.37	2.96	14.11	7.92	4.80	59.51	"
20	33870		9.85	4.35	16.88	11.90	4.74	52.28	"
21	33881		11.26	4.88	15.12	5.26	4.30	59.18	P. E. Island. ....
22	33882		12.01	4.52	15.12	4.85	3.90	59.60	"
23	33883		10.86	4.13	14.50	4.85	4.10	51.56	"
24	33884		10.62	4.41	15.68	5.05	4.00	61.24	"
25	33885		10.50	3.00	11.63	4.35	1.04	69.48	"
26	33886		10.68	5.81	16.06	5.13	4.64	57.68	"
27	33887		10.42	4.41	16.44	4.88	3.92	59.93	"
28	33888		11.55	3.40	14.06	1.06	1.90	68.03	"
29	33889		13.09	1.80	11.63	0.30	0.96	72.22	"
30	33890		13.27	1.33	10.00	1.37	1.70	72.33	"
31	29964		9.50	2.90	16.63	5.50	3.41	61.93	New Brunswick...
32	29965		6.45	3.75	16.38	7.95	3.94	61.53	"
33	29966		9.00	5.25	15.31	8.40	4.04	58.00	"
34	29967		11.19	4.41	15.68	8.55	3.00	57.17	"
35	29968		10.13	5.73	15.06	8.66	4.44	55.98	"
36	29969		10.75	4.96	15.31	8.12	5.08	55.78	"
37	29970		11.45	4.39	14.94	4.56	3.62	51.04	"
38	29971		11.80	3.79	15.81	8.75	4.50	55.35	"
39	29972		11.02	5.55	15.93	8.02	4.80	54.68	"
40	29973		11.15	3.87	16.00	7.81	4.80	53.37	"
41	29974		11.08	3.55	14.62	4.64	4.26	61.85	Middlings.
42	29975		10.10	4.35	16.69	3.55	3.26	62.05	"
43	29976		11.45	4.38	15.93	6.63	4.54	57.07	"
44	29977		11.17	4.70	14.62	5.51	3.74	60.26	"
45	29978		12.14	3.10	13.81	3.03	2.54	65.38	"
46	29979		10.69	5.14	16.81	6.43	3.80	57.13	"
47	29980		10.67	4.93	16.87	5.36	4.04	58.13	New Brunswick, Middlings.
48	29981		11.55	4.68	14.37	5.63	4.04	59.73	"
49	29982		13.50	4.11	14.81	5.83	1.08	57.67	"
50	29983		12.00	5.75	17.00	5.13	3.90	56.22	"
51	36742		10.00	2.30	15.06	5.80	3.00	63.84	Quebec,..... Shorts.
52	36743		9.91	3.74	14.94	9.24	4.84	57.33	"
53	36744		10.45	4.10	14.94	9.85	2.70	57.96	"
54	36745		11.07	2.42	14.38	2.48	2.20	67.45	"
55	36746		10.82	2.77	14.38	3.63	2.94	65.46	"
56	36747		10.93	4.37	15.69	9.62	3.26	56.03	"
57	36748		10.50	2.15	15.06	5.50	2.50	64.29	"
58	36749		11.02	4.00	17.06	5.52	4.14	58.26	"
59	36750		9.95	2.85	14.50	6.35	4.24	62.11	"
60	36751		10.86	3.61	15.25	5.19	3.22	61.87	"
61	36752		10.50	2.00	13.56	5.10	3.30	65.54	Middlings.
62	36753		10.40	3.65	13.09	10.32	3.94	58.60	"
63	36754		10.36	4.59	15.68	4.14	3.58	61.75	"



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TABLE III—MIDLINGS OR SHORTS.

Serial Number.	Number of Samples.	Remarks.	Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference.	
			p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
64	36755		11.84	4.21	16.62	5.67	3.80	57.86	Quebec..... Middlings.
65	36756		10.00	2.25	15.31	4.95	2.20	65.29	"
66	36757		10.84	3.33	15.31	5.32	4.68	60.52	"
67	36758		11.08	3.49	16.44	6.02	3.80	59.17	"
68	36759		10.64	3.62	14.44	1.44	2.10	67.76	"
69	36760		10.10	4.35	16.18	12.15	3.94	53.28	"
70	36761		10.55	5.18	16.56	5.63	4.08	58.00	"
71	38812		9.90	2.70	15.38	5.90	4.60	61.52	St. Hyacinthe..... Shorts.
72	38813		10.88	4.16	15.75	6.81	4.36	58.04	"
73	38814		10.17	3.66	15.50	7.75	4.26	58.66	"
74	38815		9.10	4.30	15.75	6.30	4.28	60.27	"
75	38816		11.04	3.34	15.69	2.70	2.80	64.43	"
76	38817		9.82	4.75	16.56	7.65	4.30	56.92	"
77	38818		11.24	4.20	15.68	6.50	4.40	57.98	"
78	38819		10.76	4.98	16.06	5.20	3.52	59.48	"
79	38820		11.60	5.27	16.56	5.44	4.04	57.09	"
80	38821		10.49	5.22	15.93	6.02	3.90	58.44	"
81	38823		10.00	4.21	16.18	8.33	4.08	57.20	"
82	38824		9.50	3.00	13.13	3.85	3.48	67.04	Middlings.
83	38825		8.35	3.25	14.81	5.75	4.40	53.44	"
84	38826		10.40	3.10	16.13	8.25	3.46	58.66	"
85	38827		10.61	3.66	16.25	5.70	3.60	60.18	"
86	38828		9.99	3.43	15.31	4.70	3.74	62.83	"
87	38829		11.86	3.80	15.06	6.10	3.70	59.48	"
88	38830		11.94	3.75	15.56	6.15	3.90	58.70	"
89	38831		11.52	3.16	15.75	2.74	3.40	63.43	"
90	38832		11.54	3.32	13.50	6.42	4.34	60.88	"
91	40212		11.37	5.69	15.94	7.35	4.54	55.11	Montreal..... Shorts.
92	40213		11.62	5.66	14.19	5.00	3.90	59.63	"
93	40214		9.55	4.50	16.19	6.15	5.14	58.47	"
94	40215		11.17	3.49	14.44	4.62	3.94	62.34	"
95	40216		10.37	3.83	14.44	4.87	3.48	63.01	"
96	40217		10.75	5.40	15.12	6.87	4.78	57.08	"
97	40218		11.86	3.91	16.18	4.65	3.74	59.66	"
98	40219		10.81	5.32	16.25	6.66	4.00	56.96	"
99	40220		10.49	4.32	13.00	9.92	3.64	58.63	"
100	40221		11.46	5.68	16.56	5.77	3.90	56.63	"
101	40222		10.86	1.28	13.63	1.82	1.80	70.61	Middlings.
102	40223		9.95	3.50	18.00	3.45	3.40	61.70	"
103	40224		12.08	0.97	13.56	0.60	1.30	71.40	"
104	40225		11.80	3.02	15.81	6.76	4.60	58.01	"
105	40226		10.24	2.41	13.87	1.12	1.90	70.46	"
106	40227		10.99	3.65	16.19	6.60	3.80	58.77	"
107	40228		9.73	5.41	16.00	7.46	4.18	57.22	"
108	40229		11.53	4.01	15.69	6.67	3.94	58.16	"
109	41211		9.83	4.26	16.38	4.78	4.74	60.01	Ottawa..... Shorts.
110	41212		9.87	5.11	17.00	6.30	4.20	57.52	"
111	41213		10.35	3.63	15.13	4.45	3.24	63.20	"
112	41214		10.51	4.61	16.25	5.64	3.60	59.39	"
113	41215		10.90	4.15	16.25	3.47	3.60	61.63	"
114	41216		9.63	4.20	16.88	6.50	4.16	58.63	"
115	41217		9.55	4.25	16.88	6.15	4.44	58.73	"
116	41218		9.40	3.75	17.00	5.25	4.14	60.46	"
117	41219		9.00	3.60	15.94	5.00	3.50	62.96	"
118	41220		11.59	4.65	15.94	7.51	3.90	56.41	"
119	41221		10.10	2.50	14.94	2.25	3.10	67.11	Middlings.
120	41222		11.19	4.09	16.13	4.39	3.34	60.86	"
121	41223		10.61	4.92	17.31	1.11	4.00	62.05	"
122	41224		10.56	2.70	15.75	5.13	3.26	62.60	"
123	41225		10.86	2.42	15.56	2.27	2.10	66.79	"
124	41226		9.40	3.00	14.44	2.30	1.70	63.16	"
125	41227		9.35	3.50	15.06	4.80	4.00	63.29	"
126	41228	Feed Flour, formerly sold as Middlings.	10.60	3.24	14.81	0.70	1.54	69.11	



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TABLE III—MIDDLINGS OR SHORTS.

Serial Number.	Number of Sample.	Remarks.	Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference.	
			p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
127	41229	Feed Hour, formerly sold as middlings.	10.72	0.95	12.88	0.22	3.40	71.83	Ottawa.. Middlings.
128	41230		11.67	1.15	13.13	0.95	0.78	72.32	"
129	41111		10.52	5.23	16.81	6.20	4.24	57.00	Kingston. Shorts.
130	41112		10.14	4.60	16.80	5.35	3.80	59.93	"
131	41113		9.97	3.95	16.38	5.26	3.70	60.74	"
132	41114		11.00	4.59	14.50	6.08	4.40	59.43	"
133	41115		11.21	4.52	16.19	5.25	3.90	58.93	"
134	41116		10.51	4.26	14.50	9.48	4.28	56.97	"
135	41117		10.08	4.81	16.06	5.75	3.90	59.40	"
136	41118		10.83	3.93	14.81	6.01	4.36	60.06	"
137	41119		10.99	3.36	14.25	4.98	3.66	62.76	"
138	41120		9.89	4.70	16.44	4.88	3.80	60.29	"
139	41121		11.48	1.75	14.69	1.04	1.40	69.64	Middlings.
140	41122		10.25	4.40	15.56	5.90	3.62	60.27	"
141	41123	Nest Brand.	10.35	3.63	16.25	4.45	3.90	61.42	"
142	41124		10.14	4.99	17.50	4.59	3.64	59.14	"
143	41125		10.32	5.22	16.44	5.18	3.74	59.10	"
144	41126		10.13	4.87	16.44	5.35	4.10	59.11	"
145	41127		10.16	5.16	16.44	7.40	3.80	57.04	"
146	41128		11.02	4.17	14.81	5.75	4.20	60.05	"
147	41129		9.65	4.55	14.25	8.60	3.68	59.27	"
148	41130		9.70	4.30	15.50	9.10	4.04	57.36	"
149	36274		10.75	3.73	15.38	7.01	4.56	58.57	Toronto...
150	36275		8.95	2.35	15.81	5.85	4.40	62.64	"
151	36276		10.89	4.43	15.56	4.87	4.94	59.31	"
152	36277		10.26	5.02	15.75	5.96	3.90	59.11	"
153	36278		11.30	4.87	16.19	4.82	3.68	59.14	"
154	36279		10.78	4.29	16.38	5.55	4.00	59.00	"
155	36280		11.45	4.85	15.68	6.07	3.88	58.07	"
156	36281		11.16	4.71	14.28	5.72	4.00	60.13	"
157	36282		11.56	3.22	13.13	1.42	2.36	68.31	"
158	36283		10.92	6.83	15.25	5.75	4.34	56.91	"
159	36284		10.34	3.30	14.50	5.18	4.38	62.30	Shorts.
160	36285		10.38	4.97	15.38	4.80	4.04	60.13	"
161	36286		8.70	4.15	14.94	8.55	4.50	59.16	"
162	36287		10.18	4.74	16.81	5.10	3.90	59.27	"
163	36288		10.85	4.72	15.75	5.89	3.88	58.90	"
164	36289		10.86	3.20	15.06	4.29	3.64	62.96	"
165	36290		11.70	4.89	15.81	5.30	3.96	58.34	"
166	36291		10.34	6.12	17.12	5.34	4.06	57.02	"
167	36292		11.22	5.68	15.81	7.51	4.08	55.70	"
168	36293		11.72	5.24	15.81	6.13	3.86	57.24	"
169	30650		9.55	5.00	16.69	4.55	4.10	60.11	London ..
170	30652		10.66	3.65	14.44	4.40	3.88	62.97	"
171	30655		9.61	5.20	15.69	5.17	4.04	60.29	"
172	30658		10.11	4.95	15.94	5.67	4.20	59.13	"
173	30660		9.59	5.24	16.63	7.79	4.84	55.91	"
174	30661		11.39	2.49	14.19	7.94	5.14	58.85	"
175	30664		11.36	5.76	14.68	6.62	4.68	56.90	"
176	30665		11.09	4.27	14.06	5.11	3.96	61.51	"
177	30669		10.36	4.63	18.93	5.19	5.74	55.15	"
178	30672		11.50	4.98	16.18	5.71	3.90	57.73	"
179	30675		10.38	4.95	17.00	5.12	3.90	58.65	"
180	35922		9.80	5.25	15.25	5.18	3.96	60.56	Windsor..
181	35923		10.27	4.61	15.31	4.37	3.76	61.68	"
182	35925		10.24	5.41	16.68	5.18	3.76	58.73	"
183	35927		9.55	4.15	16.88	8.25	4.00	57.17	"
184	35928		10.03	5.16	16.05	5.00	3.80	59.96	"
185	35929		10.32	3.92	14.44	5.93	4.14	51.25	Middlings.
186	35933		10.60	2.92	13.50	0.67	1.34	61.97	"
187	35934		10.78	2.78	12.06	1.00	1.00	72.38	"
188	35936		11.20	1.22	13.13	0.54	1.10	72.81	"



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TABLE III—MIDDLINGS OR SHORTS.

Serial Number.	Number of Sample.	Remarks.	Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference.	
			p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
189	35937		10.60	3.00	14.50	6.90	2.80	62.20	Windsor. Shorts.
190	35943		9.99	4.50	15.31	5.84	2.24	62.12	Middlings.
191	35944		9.20	4.90	13.56	6.60	3.90	61.84	"
192	35945		10.55	4.29	14.68	5.42	4.24	60.82	"
193	35948		9.35	4.70	15.56	9.75	4.30	56.34	Shorts.
194	35949		10.29	5.43	16.44	5.92	3.80	58.12	Middlings.
195	35951		10.75	5.63	17.00	5.20	4.00	57.42	Shorts.
196	35953		10.80	3.47	15.31	5.00	4.40	61.02	Middlings.
197	35954		13.56	3.42	15.12	4.73	3.34	59.83	Shorts.
198	35955		10.90	5.47	17.31	4.75	4.00	57.57	"
199	35957		10.25	3.80	12.62	1.00	1.30	71.03	Middlings.
200	39711		10.55	5.32	14.87	7.45	3.50	58.31	Manitoba. Shorts.
201	39712		10.07	4.41	16.00	6.80	4.40	58.32	"
202	39713		10.24	5.35	16.44	6.46	4.20	57.31	"
203	39714		10.21	5.72	16.87	6.72	4.30	56.18	"
204	39715		10.38	4.12	14.50	8.06	3.74	59.20	"
205	39716		9.83	4.42	16.25	6.38	4.18	58.94	"
206	39717		10.37	5.01	14.85	7.55	4.14	58.08	"
207	39718		11.09	3.40	15.75	5.02	3.88	60.86	"
208	39719		11.62	3.08	16.81	5.67	4.08	56.74	"
209	39720		10.87	3.81	15.75	5.16	3.54	60.87	"
210	39721		10.15	2.80	12.88	11.95	2.28	59.94	Middlings.
211	39722		10.75	0.95	11.25	1.25	0.90	74.10	"
212	39723		10.44	5.93	16.69	5.61	4.14	57.19	"
213	39724		8.35	3.50	16.38	7.35	3.90	60.52	"
214	35543		9.90	4.20	16.38	6.10	3.44	59.98	Calgary... Shorts.
215	35544		9.60	3.70	16.44	6.45	3.38	60.43	"
216	35545		8.40	4.85	17.31	5.25	4.04	60.15	"
217	35546		10.76	2.75	14.88	4.28	3.36	63.97	"
218	35547		10.78	3.53	15.50	3.90	3.38	62.91	"
219	35548								"
220	35549		10.15	3.87	15.56	4.21	3.34	62.87	"
221	35550		10.88	3.45	15.13	3.89	2.94	63.71	"
222	35551		10.64	3.94	15.38	5.60	4.26	60.18	"
223	35552		9.40	4.25	14.81	5.65	3.14	62.75	"
224	37646		10.86	5.21	16.25	5.09	3.80	58.79	Vancouver
225	37647		10.24	6.53	16.81	8.75	3.76	53.91	"
226	37648		9.35	3.65	13.94	6.20	3.74	63.12	"
227	37649		10.00	2.35	14.69	5.00	3.18	64.78	"
228	37650		11.01	3.49	15.06	6.15	3.60	60.69	"
229	37651		10.81	3.65	14.69	5.26	3.60	61.99	"
230	37652		10.30	1.60	15.31	4.60	3.42	64.77	"
231	37653		11.00	5.14	14.50	4.78	2.80	61.78	"
232	37654		10.36	4.35	16.18	7.66	4.70	56.75	"
233	37655		10.40	3.85	14.25	10.75	2.70	58.05	"
234	37656								Middlings.
235	37657		9.90	1.80	13.06	4.30	2.10	68.84	"
236	37658		10.29	6.88	14.28	2.76	1.84	63.95	"
237	37659		11.65	2.45	12.00	6.55	0.88	66.47	"
238	37660		10.58	3.36	13.50	1.59	2.10	68.87	"
239	37661		11.60	2.35	11.19	2.40	1.20	71.26	"
240	37662		10.35	1.60	11.56	4.85	1.78	69.86	"
241	37663		10.20	2.15	13.50	7.20	2.10	64.85	"
242	39366		11.49	2.32	13.38	4.11	2.62	66.08	Victoria... Shorts.
243	39367		11.00	4.10	18.18	4.70	3.50	58.52	"
244	39368		11.16	3.18	17.50	6.34	4.50	57.32	"
245	39369		11.57	4.76	15.31	5.48	3.68	59.20	"
246	39374		9.85	5.13	15.06	4.02	2.90	63.04	Middlings.
247	39375		10.54	2.79	13.31	6.42	2.00	64.94	"
248	39379		11.08	4.24	14.00	4.46	4.74	61.48	Shorts.
249	39382		10.07	4.63	16.13	7.35	4.14	57.68	"
250	39383		10.25	4.29	15.31	6.03	4.24	59.88	"
251	39386		8.05	3.75	15.75	5.15	3.40	63.90	"



TABLE III—MIDDLINGS OR SHORTS.

Serial Number.	Number of Sample.	Remarks.	Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference.	
			p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
252	39387	.....	9.00	3.95	14.69	7.95	2.40	62.01	Victoria. Middlings.
253	39390	.....	11.32	4.64	17.13	4.75	3.80	58.36	..... Shorts.
254	39391	.....	10.02	4.20	14.44	4.35	3.00	63.99	..... Middlings.
255	39394	.....	10.54	3.76	14.50	4.55	2.10	63.95	..... Shorts.
256	39396	.....	10.91	3.56	12.50	1.57	1.60	69.86	..... Middlings.
257	39397	.....	11.36	2.45	14.25	1.84	1.60	68.50	..... "
258	39400	.....	11.00	3.06	13.63	2.52	2.14	67.65	..... "
258 Samples. {			Means.....	10.54	4.04	15.25	5.63	3.63	60.55
			Maximums.....	13.56	6.88	18.93	12.15	5.74	74.18
			Minimums.....	6.45	0.95	10.00	0.22	0.88	51.04



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TABLE IV—CHOP FEED (*MOULÉE*).

Serial Number.	Number of Sample.	Remarks.	Moisture.	Fat (Indirect)	Proteids.	Crude Fibre.	Ash.	Difference.	
			p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
1	33871	Victor.....	10.04	2.15	8.06	13.00	3.60	63.15	N. S. .... Chop feed (Moulée)
2	33872	Standard. ....	10.34	3.61	10.00	13.03	3.22	59.80	.....
3	33873	O & B.....	10.57	2.93	10.12	6.55	2.74	67.09	.....
4	33874	Corn, oats and barley..	10.85	3.17	10.88	10.76	2.70	61.64	.....
5	33875	Banner.....	10.00	2.40	8.69	10.15	2.28	66.48	.....
6	33876	Durham.....	8.50	2.65	8.56	12.90	3.74	63.65	.....
7	33877	Victoria.....	9.35	3.45	9.38	8.60	2.40	66.82	.....
8	33878	"Gem" oats, barley and corn.	10.02	4.08	10.75	7.49	3.62	64.04	.....
9	33879	L. K. ....	10.35	2.90	14.81	11.45	3.94	56.55	.....
10	33880	.....	10.41	2.70	15.38	7.22	4.34	59.95	.....
11	29984	.....	9.00	1.80	8.68	7.85	3.60	69.07	N. B. ....
12	29985	.....	10.00	3.05	10.00	7.90	3.24	65.81	.....
13	29986	.....	9.00	4.22	12.62	4.60	1.94	67.62	.....
14	22987	.....	10.75	3.45	8.25	6.35	2.44	68.76	.....
15	29988	.....	10.04	0.90	11.37	25.80	4.00	47.89	.....
16	29989	.....	11.26	4.56	11.31	3.87	4.08	64.92	.....
17	29990	.....	9.75	3.10	8.25	10.65	4.08	64.17	.....
18	29991	.....	11.97	4.10	12.25	6.98	3.64	61.06	.....
19	29992	.....	12.21	3.10	9.69	13.80	4.50	56.70	.....
20	29993	.....	12.05	1.72	10.68	8.15	4.46	62.94	.....
21	36762	.....	8.00	3.05	9.44	13.05	3.44	63.12	Quebec. ..
22	36763	.....	11.07	3.22	11.69	12.85	4.40	56.77	.....
23	36764	.....	10.38	2.79	10.06	10.56	3.14	63.07	.....
24	36765	.....	11.85	1.53	7.19	17.06	3.92	58.45	.....
25	36766	.....	10.05	3.55	10.75	12.40	3.00	60.25	.....
26	36767	.....	10.50	1.60	12.31	8.06	3.60	63.99	.....
27	36768	.....	10.68	4.11	11.19	9.47	3.50	61.05	.....
28	36769	.....	9.55	2.00	12.19	9.00	3.50	63.76	.....
29	36770	.....	10.96	3.12	13.19	7.64	4.50	60.59	.....
30	36771	.....	10.87	4.33	10.06	12.75	4.20	57.79	.....
31	38834	Barley .....	9.80	2.25	10.50	6.15	2.60	68.70	St. Hyacinthe
32	38835	Oat.....	8.60	2.65	9.25	6.70	4.18	68.62	.....
33	38836	Barley .....	9.00	2.40	13.06	3.90	2.80	68.84	.....
34	38837	Barley meal ...	11.55	0.87	10.00	6.36	2.56	68.66	.....
35	38839	.....	11.35	3.44	11.38	4.42	2.24	67.17	.....
36	38840	Victor.....	10.49	3.40	8.06	11.23	3.34	63.48	.....
37	38841	Oats and barley....	11.26	1.09	11.81	7.50	2.68	65.66	.....
38	38842	Flaxseed and barley...	9.93	11.75	11.81	4.87	7.64	54.00	.....
39	38843	Wheat .....	11.96	2.30	14.87	4.29	3.50	63.08	.....
40	38844	Mixed. ....	11.76	1.81	9.87	13.85	3.64	59.07	.....
41	38845	Corn.....	10.60	2.85	8.81	1.85	1.30	74.59	.....
42	40232	.....	10.00	4.29	10.00	10.62	3.40	61.69	Montreal... ..
43	40233	.....	9.85	2.15	16.19	7.05	3.40	61.36	.....
44	40234	.....	10.87	2.05	12.63	9.43	3.44	61.58	.....
45	40235	.....	10.08	4.22	9.63	8.81	3.31	63.92	.....
46	40236	.....	9.92	2.73	10.94	9.89	3.32	63.20	.....
47	40237	.....	10.84	3.43	10.31	11.87	3.54	60.01	.....
48	40238	.....	9.78	3.11	10.75	10.06	2.90	63.40	.....
49	40239	.....	10.16	3.96	11.00	12.25	4.10	58.53	.....
50	40240	.....	11.85	3.02	13.62	6.68	2.26	63.17	.....
51	40241	.....	10.01	7.36	12.31	4.64	2.24	63.44	.....
52	41231	Wheat .....	11.60	3.10	15.31	4.58	4.80	60.61	Ottawa.....
53	41232	.....	11.05	1.28	10.44	9.90	2.64	64.69	.....
54	41233	.....	10.61	2.83	11.75	5.89	2.84	66.08	.....
55	41234	.....	10.45	3.10	15.31	10.55	3.00	57.59	.....
56	41235	.....	9.75	2.15	12.19	9.95	3.30	62.66	.....
57	41236	Wheat. ....	9.85	3.80	15.31	5.90	4.50	60.64	.....
58	41237	.....	8.70	2.10	6.75	12.80	4.30	65.35	.....
59	41238	.....	10.54	3.22	7.50	13.51	4.20	61.63	.....
60	41239	.....	9.20	2.10	7.44	13.85	4.24	63.17	.....
61	41240	.....	8.75	3.40	11.38	10.15	3.10	63.22	.....
62	41131	.....	10.56	3.82	10.44	10.32	3.10	61.76	Kingston....
63	41132	.....	10.79	2.78	9.00	8.46	2.92	66.05	.....



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TABLE IV—CHOP FEED (MOULEE).

Serial Number.	Number of Sample.	Remarks.	Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference.	
			p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
64	41133	.....	10.50	3.33	10.69	11.05	3.64	60.79	Kingston..Chopfeed (Moule)
65	41134	.....	10.41	3.99	10.75	10.52	3.10	61.23	.....
66	41135	.....	10.01	3.09	10.69	10.53	3.54	62.14	.....
67	41136	.....	10.51	2.33	10.06	9.33	3.36	64.41	.....
68	41137	.....	11.53	3.94	12.06	3.18	1.88	67.41	.....
69	41138	.....	10.24	2.94	10.69	10.93	3.30	61.90	.....
70	41139	.....	9.80	3.20	10.13	13.55	3.40	59.92	.....
71	41140	.....	11.49	5.09	8.81	1.67	1.04	71.90	.....
72	36299	.....	12.00	2.75	10.94	6.48	2.70	65.13	Toronto
73	36300	.....	10.99	2.12	7.69	11.45	3.34	64.41	.....
74	41301	.....	10.05	4.45	10.00	12.50	2.84	60.16	.....
75	41302	.....	8.95	2.35	11.63	5.25	2.60	69.22	.....
76	41303	.....	10.49	3.64	7.38	9.86	3.48	65.15	.....
77	41304	.....	10.35	2.40	10.50	9.00	2.60	65.15	.....
78	41305	.....	6.85	3.72	8.68	10.60	3.46	66.69	.....
79	41306	.....	9.40	3.00	10.25	10.50	2.82	64.03	.....
80	41307	.....	9.15	2.75	10.56	10.25	3.40	63.89	.....
81	41308	.....	10.51	4.07	12.06	7.13	3.44	62.79	.....
82	30653	.....	10.75	1.80	9.88	5.60	1.96	70.01	London
83	30657	.....	8.10	2.85	15.31	5.90	6.80	61.04	.....
84	30668	Corn.....	11.02	3.09	10.00	2.85	1.44	71.60	.....
85	30670	.....	12.58	2.62	10.56	6.83	2.30	65.11	.....
86	30673	Corn	11.84	4.77	9.00	1.44	1.60	71.37	.....
87	30676	.....	10.94	2.95	10.25	6.46	2.80	66.60	.....
88	30679	.....	10.45	2.70	10.50	9.80	3.14	63.41	.....
89	30680	.....	10.90	2.31	9.63	10.17	3.40	63.59	.....
90	30682	.....	12.67	2.98	8.81	1.21	1.40	72.93	.....
91	35930	.....	10.06	2.86	11.00	13.30	3.40	59.38	Windsor.....
92	35932	Corn.....	11.67	4.22	10.31	1.47	1.40	70.93	.....
93	35935	.....	11.57	3.06	11.25	11.58	3.32	59.22	.....
94	35939	.....	12.32	2.35	10.15	5.78	2.70	66.70	.....
95	35940	Corn.....	13.92	1.85	13.87	1.32	1.20	67.84	.....
96	35941	"	9.70	6.97	10.44	3.45	4.28	65.15	.....
97	35942	.....	11.00	2.40	10.06	9.20	3.20	64.14	.....
98	35946	.....	11.97	1.26	9.87	5.48	2.80	68.62	.....
99	35947	Oat	10.80	1.95	11.13	11.82	2.70	61.60	.....
100	35950	Wheat.....	11.34	2.73	14.00	2.58	2.94	66.41	Manitoba.....
101	39731	.....	10.50	2.90	10.50	7.90	2.48	65.72	.....
102	39732	.....	3.05	4.50	11.75	12.20	2.60	65.90	.....
103	39733	.....	10.05	4.12	13.67	12.21	2.34	57.61	.....
104	39734	.....	10.32	4.94	11.56	10.06	3.00	60.12	.....
105	39735	.....	10.60	2.45	11.31	8.65	2.56	64.43	.....
106	39736	.....	10.40	3.83	10.31	12.26	3.34	59.86	.....
107	39737	.....	10.25	3.85	10.50	10.10	3.10	62.20	.....
108	39738	.....	10.50	2.05	10.75	9.30	2.80	64.60	.....
109	39739	.....	10.25	3.97	15.68	5.67	4.58	59.85	.....
110	35563	Barley..	11.36	0.97	10.00	4.77	2.34	70.56	Calgary.....
111	35564	Oat	10.40	3.75	10.56	12.37	3.14	59.78	.....
112	35565	"	9.25	2.85	11.75	11.40	2.84	61.91	.....
113	35566	"	10.31	4.39	9.63	11.49	3.34	60.84	.....
114	35567	Barley.....	11.40	1.00	11.81	4.75	2.18	68.86	.....
115	35568	Oat	10.48	4.33	11.75	9.00	3.00	61.44	.....
116	35569	Barley..	11.07	3.67	11.00	5.96	2.56	65.74	.....
117	35570	Flaked oats ...	11.12	3.77	11.13	11.00	3.10	59.88	.....
118	35571	Barley..	11.20	0.98	10.13	5.22	2.44	70.03	.....
119	35572	Oat	9.25	3.35	10.50	8.45	3.20	65.25	.....
120	37666	"	9.65	3.50	10.69	9.85	3.20	63.11	Vancouver
121	37667	Common chop.	10.82	3.08	10.13	8.26	2.74	64.97	.....
122	37670	.....	9.60	2.00	9.19	10.25	3.80	65.16	.....
123	37671	Oat	9.00	2.15	10.56	8.25	3.00	67.04	.....
124	37672	Excelsior chop.....	10.59	3.10	10.88	7.88	2.90	64.65	.....
125	37673	Barley..	11.36	2.03	11.12	5.87	2.80	66.82	.....
126	37674	Wheat	9.60	2.10	12.19	2.60	1.48	72.08	.....



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TABLE IV—CHOP FEED (*MOULÉE*).

Serial Number.	Number of Sample.	Remarks.	Moisture.	Fat (Indirect).	Proteids.	Crude Fibre.	Ash.	Difference.	
			p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
127	37675	No. 1 chop... ..	10·85	2·20	11·19	8·00	2·90	64·86	Vancouver, Chop Feed.
128	39376	B. & K. Dairy....	8·19	4·02	8·81	19·39	4·88	56·71	Victoria ..
129	39377	B. & K. ground... ..	10·54	3·50	8·75	12·55	3·80	60·86	..... "
130	39380	Creamery.....	10·84	2·26	10·94	7·67	5·80	62·49	..... "
131	39384	Corn.. ..	9·60	2·10	9·25	11·60	3·60	63·85	..... "
132	39388	Oat meal chop .....	8·60	2·95	6·63	18·85	6·70	56·27	..... "
133	39392	Excelsior.....	11·17	3·32	12·00	7·14	3·06	63·31	..... "
134	39395	.....	9·35	2·15	10·56	9·70	3·76	64·48	..... "
135	39399	.....	11·25	3·31	13·12	6·76	3·34	62·22	..... "
135 Samples. { Means.....			10·38	3·09	10·70	8·69	3·24	64·45	
{ Maximum.....			13·92	11·75	16·19	25·80	7·64	74·59	
{ Minimum .....			3·05	0·87	6·63	1·21	1·04	47·89	







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## APPENDIX M.

## BULLETIN No. 192—COPPER IN VEGETABLES.

OTTAWA, November 9, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you, herewith, a report upon the copper content of 70 samples of tinned vegetables, chiefly peas, and of French origin. One sample (Mushrooms) was purchased through a mistake on the part of the inspector. This contains no copper.

A decision of the United States Department of Agriculture, dated May 1, 1908, is as follows :—

## FOOD INSPECTION DECISION 92.

## THE USE OF COPPER SALTS IN THE GREENING OF FOODS.

As provided in Food Inspection Decision 76, the Secretary of Agriculture has considered the question of foods greened with copper salts. It has been decided that foods so treated are not entitled to entry into the United States under the provisions of section 11 of the Food and Drugs Act. Inasmuch as contracts have already been made for the present year's pack, until January 1, 1909, all vegetables greened with copper salts, but which do not contain an excessive amount of copper and which are otherwise suitable for food, will be allowed entry into the United States, if the label bears the statement that sulphate of copper or other copper salts have been used to colour the vegetables. On and after January 1, 1909, no foods greened with copper salts will be allowed entry into the United States.

GEO. B. CORTELYOU,  
*Secretary of the Treasury.*

JAMES WILSON,  
*Secretary of Agriculture.*

OSCAR S. STRAUS,  
*Secretary of Commerce and Labour.*

WASHINGTON, D.C., May 1, 1908.



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It will be noted that the phrase 'an excessive amount of copper,' occurs in this document, as well as in F.I.D., 76, of June 18th, 1907. It is evidently desirable, to ascertain what constitutes an excessive amount of copper in vegetables. The decision quoted evidently conditions the total absence of copper, after January 1, 1909.

So high an authority as Dr. Tunncliffe (British Food Commission, 1899) holds that 'in a proportion not exceeding half a grain of metallic copper per pound, the presence of copper is quite harmless.' This corresponds to 71 parts per million, as a maximum. I am not aware of any other recognized authority having definitely stated a permissible limit for copper.

If we accept this limit, for purposes of comparison, it is found that 42 samples of the present collection exceed the amount named: i.e., 60 per cent of the collection.

The copper has been determined electrolytically, and is stated as parts by weight per million on the drained, but not dried vegetables.

All of these were found in good condition; and it is interesting to note that decided anti-putrescent effects are claimed for copper by Dr. Springer, (Journal of Industrial and Engineering Chemistry; 1909, p. 676).

The interior of the can was slightly rusted in two cases, but not to such a degree as to affect the colour of the contents. In the case of four samples, viz.: 40347, 40348, 40349 and 40350, the copper was determined separately in the drained vegetables and in the liquid content of the tin. The liquid contained no copper in solution, except in the case of No. 40348 where 30 parts copper per million were obtained.

I am unable, at present, to advise definitely as regards small amounts of copper in vegetables; but would respectfully recommend that medical opinions on the subject be obtained. The present report will serve the purpose of furnishing material for opinion; and I beg to recommend its publication as Bulletin No. 192.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

NOTE.—While this bulletin is in press, a highly important article on the coppering of vegetables appears in the current number of the 'Zeitschrift für Untersuchung der Nahrungs und Genussmittel.' From this article by Dr. G. Stein, the following is abstracted:—

It is particularly important to the keeping of tinned vegetables that they should be thoroughly sterilized. Sterilization under pressure at 120° C. destroys the chlorophyll, and the vegetables become yellow-brown unless previously treated with copper. Copper was formerly introduced by boiling in copper vessels, which yielded copper to solution in the acids naturally present in the vegetables; it is now introduced as salts of copper, mainly as the sulphate. The coppering of vegetables was first practised in France, but popular appreciation of the product has caused the innovation to be adopted by other countries. No other method of giving a desirable green to the preserved vegetable has proved a success; and although it is possible by using selected material and working with special care, to retain much of the natural green of peas in the preserved article, the process would be too costly to be worked profitably on the large scale.

It is recognized that certain copper salts are poisonous; but that copper may be present in harmless combinations would appear from the fact that many vegetables naturally contain copper. Tschirch has shown that in coppered peas the copper exists as *phylocyanate* (green) or as *leguminate*, which is colourless, and is only formed when the process of coppering is carried too far. Neither of these compounds is soluble in water; and the watery fluid in the tin (*Einbettungsflüssigkeit*) may be quite free from copper.

Well known investigators have shown that most copper compounds are either harmless, or cause vomiting and diarrhoea only, in quantities of 100 to 200 milligrams daily, even when continued for weeks. When excess of copper is employed in greening



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peas, the excess appears as leguminate which has been proved to be harmless to rabbits, fed for weeks on peas containing 0.126 per cent of copper. Copper salts of the fatty acids (stearates, oleates, &c.) are however known to be poisonous, and it is not certain that, by the simultaneous use of coppered vegetables and fatty foods, copper salts of the fatty acids may not be formed, and poisoning result.

K. Spiro has shown that it is only in the liquid content of the tin that copper salts, capable of reacting with fatty acids, may be present. The copper of the peas themselves does not so react. The imbedding fluid should contain no dissolved copper; and usually contains none.

In France, the prohibition of copper in colouring vegetables, was rescinded in 1889. In Italy and Switzerland only such are prohibited as contain more than 100 parts of copper per million. Austria forbade both the manufacture and the importation of coppered vegetables until 1899, since which date a maximum of 55 parts copper per million is tolerated. Belgium forbids the use of copper, as 'useless and harmful.' Russia also forbids coppering, while England has no legislation on the subject. Germany, since 1896, permits the presence of 55 parts copper per million.

It becomes a serious question for the manufacturer, in the light of above named legislation, to ascertain whether or not he can satisfactorily green his vegetables with so small an amount of copper as 55 parts per million. The work of Graff and others indicates that it is for the most part impossible to give a uniform and satisfactory greening with so small an amount of copper. The question of exact methods of analysis is also one of importance, where a limit of 55 parts per million is to be worked to. Stein approves of the Electrolytic method, for both accuracy and convenience.

From Dr. Stein's analyses, I quote the following interesting figures:—

## COPPER CONTENT (PARTS PER MILLION).

In the Drained Vegetables.	Imbedding fluid.	Total.
84	11	95
78	13	91
86	17	103
48	5	53
46	5	51
75	4	79
76	20	96



BULLETIN No. 192—FRENCH PEAS (IMPORTED).

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.	
				Quantity.	Cents.			Condition.	Copper Parts per Million.

DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.

1909.									
Oct.	5	French Peas.....	41841	Dillon Bros., Halifax, N.S.	3 tins.	54	C. H. Feyosimeau, Bordeaux, France.	Good.....	80
"	6	".....	41842	Bauld Bros., Halifax, N.S.	3 "	45	Alp. Pinard, Bordeaux, France.	Imported by Vendors, guaranteed under Food Act, Serial Number 1754.	80
"	6	".....	41843	John Tobin & Co., Halifax, N.S.	3 "	68	Brun Freres, France	"	100
"	8	".....	41844	W. A. Smith, Kentville, N.S.	3 "	51	Moreau & Co., France	"	90
"	12	".....	41845	Black & Co., Truro, N.S.	3 "	40	Francios Petit & Co., Paris, France.	Imported by Vendors.....	90
								Can slightly rusted.	.

DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON—INSPECTOR.

Sept.	9	French Peas( Imported).	39578	H. W. Cole, Ltd., St. John, N.B.	3 tins.	40	Chas. Binks, Montreal	Good.....	90
"	13	".....	39579	Baird & Peters, St. John, N.B.	3 "	40	Lafurie Freres, Paris and Bordeaux, France.	"	70
"	14	".....	39580	McPherson Bros., St. John, N.B.	3 "	75	F. Delory, Lorient, France..	"	60
"	21	".....	39581	Geo. T. Whelpley Estate, Fredericton, N.B.	3 "	75	"	"	80
Oct.	6	".....	39582	F. P. Reid & Co., Moncton, N.B.	3 "	33	Chas. H. Binks, Montreal.	Direct importation through Chas. H. Binks, "Millionaire" Brand.	90



DISTRICT OF QUEBEC—E. BELAND, INSPECTOR.

Sept.	9	French Peas.....	36647	J. S. Hogue, St. Paulin.....	3 tins.	45	L. Chaput fils & Co., Mont- real.	Good.....	60
"	10	"	36648	J. V. Milot, St. Alexis.....	2 "	25	"	"	100
"	13	"	36649	Charle Heaton, Louiseville..	3 "	60	Hudon Hebert, Montreal....	"	70
"	14	"	36650	L. P. St. Pierre, Trois Riviere	3 "	90	Whitead & Turner, Quebec..	"	60
"	14	"	36651	L. P. Peltier, Trois Riviere..	3 "	90	Hudon Hebert, Montreal....	"	100

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

Sept.	17	French Peas (Imported)..	1245	L. Moreau, St. Jean.....	3 bxs.	45	L. A. Price, Bordeaux, France	Good.....	80
"	22	"	1246	J. O. McDonald, Lac Me- gantic.	3 "	60	Edgar & Cie.....	"	80
"	24	"	1247	V. Archambault, Sherbrooke	3 "	60	B. Leforest, Périgumx.....	"	70
"	27	"	1248	R. O. Brodeur, St. Hyacinthe	3 "	54	F. Delorey, Lorient.....	"	80
"	23	"	1249	C. J. Lane, Lennoxville....	3 "	38	Geo. Dalidet & Cie, Bordeaux	"	70

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

Sept.	8	French Peas (Imported)..	40346	J. O. Desrochers, 472 St. Denis St., Montreal.	3 tins.	50	F. Delorey, Lorient, France.	Good.....	70
"	8	"	40347	Moquin et frere, 120 St. Denis St., Montreal.	3 "	45	"	Marque "Soleil." Fabrique de Consomes Aliementaire	70
"	8	"	40348	Currie Bros., 185 Bleury St., Montreal.	3 "	45	Falbot freres, Bordeaux, France.	"	90
"	10	"	40349	N. Collin & Co., 310 Notre Dame East, Montreal.	3 "	60	"	"Le Soleil"	50
"	17	"	40350	F. Poirier, 24 St. Catherine West, Montreal.	3 "	54	Marie Thumas Louvains....	"	80



BULLETIN No. 192—FRENCH PEAS (IMPORTED).

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.	
				Quantity.	Cents.			Condition.	Copper Parts per Million.

DISTRICT OF OTTAWA—J. A. RICKEY, INSPECTOR.

1909.										
Oct.	1	French Peas (Imported).	42826	J. G. Stewart, Ottawa.	3 tins.	60	Unknown.	....., Labelled Talbot freres.	Good	80
"	1	"	42827	P. D. Herbert, Ottawa.	3 "	52	S. J. Major, Ltd., Ottawa.	Le Soleil. Société Anonyme	"	80
"	1	"	42828	"	3 "	45	Henri Jonas, Montreal	P. Delorey, Lorient, France	"	140
"	1	"	42829	C. Moreland, Ottawa.	3 "	75	"	"	"	100
"	1	"	42830	"	3 "	1 05	"	Bayle fils frere, France	"	80

DISTRICT OF KINGSTON JAS. HOGAN, INSPECTOR.

Sept.	7	French Peas.....	42741	J. Crowford, Kingston.....	3 tins.	60	Beaumarghand.....	.....	Good	100
"	7	" .....	42742	J. Redden, Kingston.....	3 "	75	Delorey, Lorient, France.....	.....	"	80
"	8	" .....	42743	W. T. Patterson, Belleville.....	3 "	45	" .....	.....	"	70
"	8	" .....	42744	Wallbridge & Clarke, Belle-ville.....	3 "	60	" .....	.....	"	100
"	8	" .....	42745	Gullet Bros., Cobourg.....	3 "	45	Le Lielos .....	.....	"	30



DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.

Sept. 23	French Peas	41387	Peebles Hobson Co., Ltd., 3 tins, Hamilton.	45	R. Monbadon, Paris and Bordeaux, France.	Good	60
" 22	"	41388	A. R. McLachlin, Hamilton.	40	Geo. Dalidet & Co., Bordeaux, France.	"	40
" 25	"	41389	W. J. Nichol, Toronto.	30	Unknown.	"	60
" 25	"	41390	A. White, Toronto.	45	R. S. McIndoe, Toronto	"	110
" 27	"	41391	R. Barron, Ltd., Toronto	45	R. Monbadon, Paris and Bordeaux, France.	"	70

DISTRICT OF LONDON—T. KIDD, INSPECTOR.

Sept. 14	French Peas	30820	A. Beattie & Co., St. Mary's 3 tins	35	Unknown.	Good	70
" 14	"	30823	Beattie & Co., Stratford	50	"	"	60
" 20	"	30842	Jackson & Sons, Guelph	38	Henri Jonas, Montreal	"	80
" 21	"	30847	Chas. Eweng, Goderich	45	W. G. Patrick, Toronto	"	50
" 27	"	30862	A. J. Groom, Guelph	45	Balfour Smye, Hamilton	"	110

DISTRICT OF WINDSOR—JNO. TALBOT, INSPECTOR.

Oct. 4	French Peas	42606	Burmise & Co., Chatham	38	F. Delorey, Lorient, France.	Good	110
" 7	"	42631	T. J. Salmoni, Kingsville	75	Beaumarchand, Paris.	Can slightly rusted.	80
" 8	"	42644	Birchell & Vansickle, St. Thomas.	45	Dandicolle & Ganden, Bordeaux.	Good	120
" 8	"	42645	Butler Bros., St. Thomas	45	Beaumarchand, France.	"	100
" 8	"	42646	T. A. Rowat, London	60	G. Dalidet & Co., Bordeaux	"	90



BULLETIN No. 192—FRENCH PEAS (IMPORTED).

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.	
				Quantity.	Cents.			Condition.	Copper Parts per Million.

DISTRICT OF MANITOBA A. C. LARIVIERE, INSPECTOR.

1909.									
Sept. 13	French Peas	39816	A. Macdonald & Co., Winnipeg, 3 tins.	40		Ch. Teyssouneau, rue de la Gare, Poitiers, France.	Moynes a la Good.	.....	70
" 13	"	39817	E. B. Nixen, Winnipeg, 3 "	60		" " " " " "	" " " "	.....	60
" 13	"	39818	The T. Eaton Co., Winnipeg, 3 "	55		" " " " " "	Extra fine.	.....	50
" 13	"	39819	The Hudson Bay Co., Winnipeg, 3 "	90		R. Monbardon, Paris and Packed for the Hudson Bay Co., Bordeaux, France.	" " " "	.....	40
" 13	"	39820	" " " " " " 3 "	45		F. Delorey, Lorient, France.	Pois Demi Fine.	.....	100

DISTRICT OF CALGARY R. W. FLETCHER, INSPECTOR.

Sept. 10	French Peas (Imported).	35627	Hudson Bay Co., Lethbridge 3 tins.	75		F. Delorey, Lorient, France.	" " " "	Good	80
" 10	"	35628	Bentley Co., Lethbridge 3 "	75		Grosot Beaud, Lorient, France.	" " " "	"	30
" 11	"	35629	Spencer & Todd, Medicine Hat, 3 "	75		J. R. Teyssouneau, Lorient, France.	" " " "	"	80
" 11	"	35630	H. W. Ireland & Co., Medicine Hat, 3 "	75		A. Roger & Co., Bordeaux, France.	" " " "	French mushrooms, not peas	100
" 14	"	35631	Hudson Bay Co., Calgary 3 "	75		R. Monbardon, Paris, " "	" " " "	Good	100



DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR.

Sept	17	French Peas (Imported).	37753	W. T. Walker, Steveston...	3 tins.	75	V. V. E. Savarin, Bordeaux.	Good.....	90
"	18	"	37754	H. W. Chapman, Vancouver	3 "	60	Lafaurie freres, Bordeaux.	" .....	90
"	20	"	37755	Hudson Bay Co., Vancouver	3 "	75	R. Mombadon, Bordeaux	" .....	70
"	20	"	37756	H. A. Edgett & Co., Van-	3 "	75	Geo. Dalidet & Co., Bordeaux	" .....	90
"	21	"	37757	London Grocery, Vancouver	3 "	1 05	" .....	" .....	80

DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

Oct.	14	French Peas (Imported).	41574	Windsor Grocery Co., Vic-	3 tins.	75	R. Mombadon, France.	Extra fine .....	80
"	15	"	41575	The West End Grocery Co., B.C.	3 "	60	George Dalidet & Co., Bor-	" .....	80
"	15	"	41576	Copas & Young, Victoria, B.C.	3 "	1 05	The Hudson Bay Co., Vic-	" .....	60
"	15	"	41577	Saunders Grocery Co., Ltd., B.C.	3 "	75	George Dalidet & Co., Bor-	" .....	80
"	18	"	41578	Erskine & Co., Victoria, B.C.	3 "	75	J. H. Todd & Son, Victoria, B.C.	" .....	50







SESSIONAL PAPER No. 14

## APPENDIX N.

## BULLETIN No. 193—LARD.

OTTAWA, December 3, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report covering the results of examination of 70 samples purchased as *Lard*, throughout Canada, in September and October last.

Lard has on two former occasions been made the subject of inspection by this department, viz.: in August and September of 1888 (See Bull. 7) and in December of 1907 and January of 1908 (See Bull. 147).

Referring to Bulletin 7, I find that the inspection of 1888 was consequent upon 'numerous prosecutions for selling adulterated lard which have, within the last twelve months, taken place in England.' The report in question deals with 109 samples, and 66 per cent of these are found to be adulterated under the Act, by admixture with, and substitution of an inferior article. This inferior article is *Water* in 12 samples, and cotton seed oil, or stearin in 61 samples. Of this collection 38 samples were Canadian made, 60 samples were American made, and 11 samples were of unknown origin. All but one of the American lards contained cotton seed products, while only three Canadian lards were found to contain cotton seed oil. The late Chief Analyst remarks: 'There are to be found a few cases, from which it would seem that our manufacturers are beginning to imitate American practices.'

At the date of this report (1888) the use of cotton seed oil in lard manufacture was comparatively a new thing. The importance of inspectorial work under the Adulteration Act is well illustrated by the fact that, while 66 per cent of the samples examined in 1888 contained cotton seed oil without acknowledgment, subsequent inspections show that the sale of a cotton seed oil containing article, as lard, is now quite an exceptional occurrence. The intermixture of cotton seed oil continues, but the product is sold as a compound, and conforms to Section 24 (d) of the Act. The inspection of 140 samples in February, 1908, showed only two (2) to contain cotton seed oil, without acknowledgment of the fact.

The present report dealing with 70 samples, shows five (5) samples, sold as genuine, to contain cotton seed oil.

No objection on the ground of wholesomeness, can be taken to the admixture of cotton seed oil in factitious lards, or lard substitutes; but the sale of an article containing cotton seed oil, as a genuine lard, constitutes adulteration under section 3 (a) (b) of the Act. Among samples now reported, eighteen give more or less distinct indications of cotton seed oil (Halphen test); but these are not sufficiently definite to justify the conclusion that there has been purposeful addition of the article. It is known that hogs which have been fed on cotton seed meal may yield a fat capable of



1 GEORGE V., A. 1911

reacting to the Halphen test : and imperfect cleaning of machinery which had been used in manufacturing a compound lard, might easily result in such slight admixture with cotton seed oil as is indicated by the reactions found.

Adulteration by the addition of water to lard, seems to be a thing of the past. In 1888, 11 per cent of the samples examined contained water in excess, the amount varying from 5.55 per cent to 24.47 per cent. One per cent of water in lard is a reasonable maximum allowance, so that the incorporation into lard of the large amounts found in 1888, was a palpable fraud, and required considerable skill in its execution. In 1908 we found one market sample (out of 140 examined) to contain 1.36 per cent of water, evidently by accident since other samples made by the same firm, gave only traces of water. The inspection of 70 samples now reported, shows only one sample to contain as much as 1.18 per cent water, which is barely above the limit quoted and recommended to be made legal.

The use of tallow in the manufacture of compound lards is believed to be not uncommon. The chemical and physical constants for beef and mutton tallow so closely approximate those for ordinary hog fat as to make it difficult for the analyst to assure himself of the presence of tallow. Among many methods of examination, that have been published during recent years, all of which methods have been studied in this laboratory, the most promising seems to be that described by Dr. J. A. Emery, of the U. S. Bureau of Animal Industry (Circ. 132). This depends upon the exact determination of the melting point of the stearins, crystallized out from an ether solution of the fats. The melting points referred to have been determined with great care by Mr. C. C. Forward, of this laboratory, and are inserted in the column headed 'Melting points of solid glycerides.' Although very suggestive in many instances, I do not regard the evidence afforded by them as sufficiently conclusive to justify positive deductions. The method is probably capable of greater refinements than it has yet received, and is being studied with a view to giving its results a greater degree of positiveness than is yet possible. A memorandum by Mr. Forward is appended, giving some results of such investigation as he has made. The conditions under which the solid glycerides are obtained in greatest purity, that is, as free as possible from oleins, are not easily secured. It may be that recrystallization of these would yield crystals having better defined melting points. The matter is being further investigated ; and I trust that we may yet be able to obtain a working method that shall enable us to detect with certainty the presence of tallows.

I beg to recommend the publication of this report as Bulletin No. 193.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,

*Chief Analyst.*

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Note. Correspondence with vendors and manufacturers of lard, since writing the above, seems to justify the addition of a note calling to the attention of vendors the importance of the sale of an article for just what it is. It is quite clear that several retail dealers in lard, whose names appear in this Bulletin, purchased compound lards, plainly marked as such by the manufacturers, and purchased at about four cents per pound below the price of lard. These dealers surely knew that it was not lard which they bought, but compound lard, a substitute for the real article. Many of them sold the article to our inspectors stating it to be compound lard ; but others sold it as *lard*, with no explanation. In this case the vendor is clearly responsible for selling an adulterated article, and is amenable to the penalties imposed by the Act.

The labelling of a factitious article as *Family Lard*, is not a statement of its compound character, and gives no warning of its sophistication to the purchaser.



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## MEMORANDUM.

The method of Emery (Circ. 132, Bureau Animal Industry, U. S. Department of Agriculture) for detection of tallow in lard consists in crystallizing the solid glycerides from the sample of fat by maintaining at a temperature of about 17.5° for 18 hours, a 20 per cent solution (weight volume) of the fat in ether; and the subsequent determination of the melting point of the crystals obtained after washing with cold ether and drying.

In applying this method to the present collection of market lards a number of difficulties were experienced. It was found in determining the melting point that the error due to variations in manipulation might amount to half a degree (centigrade); and that the error due to variations in the temperature of the crystallizing bath (between 15° and 20° C.) might amount to one degree. As the difference between the melting point of the crystals from pure lard and those from pure tallow is not over three and a half degrees, it is evident that the range of error must be greatly reduced in order to obtain conclusive results.

In further work a slight alteration was made in the melting point apparatus, viz., the substitution of sulphuric acid (1.3) for water in the inner compartment and also heating the bath more slowly. This was found to lessen the range of error to some extent, at the same time giving slightly higher results in all cases.

Sixteen samples of apparently pure lard (*i.e.*, lard having Iodine number 55-60, and Butyro-refractometer reading 50-51° and containing no cotton seed oil) gave as a maximum melting point of glycerides 64.4°, a minimum of 63.5°, and an average of 64.0°. The following results were obtained with home rendered pure leaf lard and tallow:—

Pure leaf lard.....	63.9°
“ “ 4 per cent tallow .....	63.5°
“ “ 8 “ “ .....	63.0°
“ “ 10 “ “ .....	62.6°
“ “ 15 “ “ .....	62.5°
Pure tallow.....	60.3°

Investigatory work is still in progress along the following lines. Maintaining the temperature constant to 0.2° C., during the 18 hours of crystallization at 17° or 18° C. whichever is found most satisfactory. Exact conditioning of the melting point determination with special reference to size of capillary tubes, initial temperature and time of heating and one or two modifications in the thermometer and bath used.

It is hoped that the total range of error on any sample of lard tested may be so reduced as to make it possible to detect with certainty an adulteration of less than 10 per cent tallow.

CHARLES C. FORWARD.



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF NOVA SCOTIA—

1909.						
Oct.	6	Lard. ....	41836	C. S. Davis, Halifax, N.S...	1½ lb. 26	Langs Packing Co., Montreal
"	6	" .....	41837	J. H. Emmett, Halifax, N.S.	1½ " 27	Vendor....
"	8	" .....	41838	DeWolfe & Lamont, Kentville, N.S.	1½ " 27	F. W. Fearman, Hamilton..
"	8	" .....	41839	John Riley, Windsor, N.S...	1½ " 30	Swifts, Chicago ...
"	11	" .....	41840	The 2 Barkers Ltd., Amherst, N.S.	1½ " 27	Wm. Davies, Toronto.....

DISTRICT OF NEW BRUNSWICK—

Sept.	9	Lard. ....	39573	Peters & Rice, St. John, N.B	2 lbs 34	F. W. Fearman, Hamilton. .
"	13	" .....	39574	Slipp & Flewelling, St. John, N.B.	1½ lb 27	Vendors .....
"	22	" .....	39575	B. H. Smith & Sons, Woodstock, N.B.	1½ " 26	H. F. Randolph & Sons, Fredericton, N.B.
Oct.	5	" .....	39576	W. H. Culbert, Sussex, N.B.	1½ " 30	John P. Squire & Co., Boston Mass.
"	6	" .....	39577	The 2 Barkers Ltd., Moncton, N.B.	1½ " 26	The Wm. Davies Co. Ltd., Toronto.

DISTRICT OF QUEBEC—

Sept.	8	Lard. ....	36642	Jos. A. Deschene, St. Ursule	1½ lb. 23	Chevalier Pouliot, Joliette..
"	8	" .....	36643	A. Plante, St. Leon .....	1½ " 24	Davis, Montreal.....
"	9	" .....	36644	W. Duhaime, St. Paulin ....	1½ " 23	" .....
"	10	" .....	36645	Dordré Dho, St. Alexis . . .	1½ " 21	L. Chaput fils & Cie, Montreal.
"	10	" .....	36646	J. V. Milot, St. Alexis ....	1½ " 26	" .....

DISTRICT OF ST. HYACINTHE—

Sept.	15	Lard. ....	1239	J. W. Turcott, Drummondville.	1 lb.. 18	The Laing Packing & Prov. Co. Ltd., Montreal.
"	15	" .....	1240	J. St. Pierre, Actonvale.....	1 " 14	Gunns, Ltd., West Toronto..
"	16	" .....	1241	Alph. Bellard, Waterloo....	3 lbs.. 45	Vendor .....
"	22	" .....	1242	D. M. Matheson, Lake Megantic.	3 " 55	The Whyte Packing Co., Stratford.
"	27	" .....	1243	R. G. Brodeur, St. Hyacinthe.	1 lb.. 16	Laings Montreal.....



## SESSIONAL PAPER No. 14

## LARD.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.					Number of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Iodine Number. (Hanus.)	Butyro Re- fractometer at 40° C.	Melting point of Solid Glycerides.	Halphen Reaction.		

## R. J. WAUGH, INSPECTOR.

	p. c.						
.....	None...	65.9	51.7	.....	None.....	41836	Genuine.
Kettle rendered	0.50	56.5	50.0	64.0	"	41837	"
Labelled Pure Lard.....	None...	62.9	51.0	63.7	Light red.	41838	"
'Silver Leaf' Pure Brand.	"	66.7	51.5	64.4	None.....	41839	"
Labelled Pure	"	60.6	50.4	63.0	"	41840	"

## J. C. FERGUSON, INSPECTOR.

Star Brand Pure	None	60.4	50.9	64.0	None.....	39573	Genuine.
.....	"	55.4	49.5	63.7	"	39574	"
'Silver Leaf' Guaranteed Pure.	"	65.4	51.2	64.2	"	39575	"
Pure	.....	.....	.....	.....	.....	39576	Sample lost in transit. (Railway collision.)
"	None	61.0	50.5	63.1	None	39577	Genuine.

## E. BELAND, INSPECTOR.

.....	None	65.9	51.4	.....	None	36642	Genuine.
.....	"	61.3	51.0	63.4	"	36643	"
.....	"	61.8	50.6	62.9	"	36644	"
.....	"	55.6	49.5	63.8	"	36645	"
.....	"	58.8	50.1	64.0	"	36646	"

## J. C. ROULEAU, INSPECTOR.

Extra Pure Lard.....	0.13	62.4	50.9	64.2	Faint red	1239	Genuine.
Box marked Gunn's Easifirst Shorten'g, Excels all others	None...	83.2	55.0	61.5	Deep red.	1240	Contains Cotton seed oil. Adulterated.
.....	"	58.4	50.1	62.2	None.....	1241	Genuine.
Labelled Pure Lard.	"	63.0	51.0	63.8	"	1242	"
Compound.....	"	93.4	56.7	61.6	Deep red.	1243	Contains Cotton seed oil. Sold as Com- pound.



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF MONTREAL—

1909.						
Sept.	2 Lard. ....	40301	Wilfrid Bleau, 168 Plessis St. Montreal.	1½ lb.	22	Canada Packing Co., Montreal.
"	3 " .....	40302	T. A. Berube, 338 Colonial Ave., Montreal.	1½ "	24	" " ..
"	3 " .....	40303	T. L. Hodgson, 385 Laval Ave., Montreal.	1½ "	27	Whyte Packing Co.....
"	4 " .....	40304	P. Brunet, 697 Mount Royal Ave., Montreal.	1½ "	26	L. Chaput fils & Cie.....
"	4 " .....	40305	A. Boyer, 230 Dufferin St., Montreal.	1½ "	26	Unknown.....

DISTRICT OF OTTAWA—

Sept.	24 Lard. ....	42821	A. Sweet & Co., Winchester.	1½ lb.	27	The Geo. Matthews Co. Ltd Hull.
"	28 " .....	42822	C. Carmichael, Spencerville..	1½ "	27	" " ..
Oct.	5 " .....	42823	Miss Smith, Ottawa.....	1 "	17	Park Blackwell Co. Ltd., Toronto.
"	5 " .....	42824	Wall & Co., Ottawa.....	1½ "	27	Wight & Co., Toronto.....
"	5 " .....	42825	The Geo. Matthews Co. Ltd., 96 Queen St., Ottawa.	1½ "	27	Vendors, Hull, P.Q.....

DISTRICT OF KINGSTON—

Sept.	7 Lard. ....	42736	Anderson Bros., Kingston...	1½ "	25	Vendors.....
"	7 " .....	42737	J. Redden, Kingston.....	1½ "	25	Wm. Davies, Toronto.....
"	7 " .....	42738	Wm. Davies, Kingston.....	1½ "	25	" " .....
"	9 " .....	42739	Mason Co., Peterboro. ....	1½ "	25	Fowlers, Hamilton. ....
"	9 " .....	42740	Matthews Co., Peterboro...	1½ "	27	Matthews, Peterboro.....

DISTRICT OF TORONTO—

Sept.	13 Lard. ....	41382	E. H. Wilson & Co., Markham.	1½ lb.	24	The Wm. Ryan Co., Ltd., Toronto.
"	15 " .....	41383	J. C. Mossington, Orillia....	1½ "	25	The Ingersoll Packing Co., Ingersoll.
"	16 " .....	41384	C. Beck Mfg. Co., Ltd.....	1½ "	25	The Park Blackwell Co., Ltd., Toronto.
"	24 " .....	41385	A. S. Cain, Dundas. ....	1½ "	25	F. W. Fearman Co., Ltd., Hamilton.
"	27 " .....	41386	P. D. Dunn, 1646 Queen St. West, Toronto.	1½ "	27	The Wm. Davies Co., Ltd., Toronto.



SESSIONAL PAPER No. 14

## LARD.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.					Number of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Iodine Number. (Hanus.)	Butyro Re- fractometer at 40° C.	Melting point of Solid Glycerides.	Halphen Reaction.		

## J. J. COSTIGAN, INSPECTOR.

	p. c.						
Sold as Pure. Tub labelled Choice Family Lard.	0.52	85.2	55.4	...	Deep red.	40301	Contains Cotton seed oil. Adulterated.
" " ..	None...	88.1	55.2	.....	"	40302	" "
Labelled Pure Lard.....	" ...	61.3	51.2	64.4	None.....	40303	Genuine.
.....	" ...	63.3	51.1	.....	"	40304	"
Sold as Pure.....	" ...	57.8	50.2	63.9	"	40305	"

## J. A. RICKEY, INSPECTOR.

Sample from Pail marked Pure Lard.	None...	55.3	50.0	62.0	None.....	42821	Genuine.
" " ..	" ...	56.2	50.0	63.2	Faint pink	42822	"
Labelled Choice Family Lard 'Silver Leaf.'	" ...	60.3	51.0	63.7	Pink. ....	42823	"
.....	" ...	61.9	51.0	64.4	None. ....	42824	"
Sold as Pure Lard.....	" ...	56.9	50.0	61.7	Light pink	42825	"

## JAS. HOGAN, INSPECTOR.

.....	0.12	53.5	50.0	63.8	None.....	42736	Genuine.
.....	0.26	58.6	50.6	64.1	"	42737	"
.....	None...	58.0	50.2	64.1	"	42738	"
.....	1.18	62.5	50.9	63.5	"	42739	Genuine: Water con- tent rather high.
.....	None...	56.1	49.8	63.9	"	42740	Genuine.

## H. J. DAGER, INSPECTOR.

Labelled Pure Lard. ....	None...	64.5	51.4	63.8	Light red.	41382	Genuine.
'Beaver' Brand Pure Lard.	" ...	55.8	49.8	63.5	None.....	41383	"
Choice Family Lard.....	" ...	61.2	51.7	62.9	Pink. ....	41384	"
'Star' Brand Pure Lard.	" ...	59.0	50.8	63.0	"	41385	"
Pure Refined Lard.....	" ...	60.4	50.7	61.4	None. ....	41386	"



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	
DISTRICT OF LONDON—						
1909.						
Sept. 20	Lard.....	30845	Mr. McHardy, Guelph...	1½ "	26	J. & A. McHardy, Guelph..
" 22	" .....	30855	Hodgins & Bedgood, Blythe.	1½ "	26	A. M. Smith, London.....
" 22	" .....	30860	D. M. Gordon, Wingham...	1½ "	26	Ingersoll Packing Co., Ingersoll.
" 27	" .....	30865	Benson Bros., Guelph. ....	3 "	50	Fowlers & Co., Hamilton....
" 27	" .....	30866	Jackson & Son, Guelph.....	1½ "	25	White Packing Co., Stratford
DISTRICT OF WINDSOR—						
Oct. 11	Lard.....	42648	A. J. Clark & Co., London..	1½ "	Nil.	Park Blackwell Co., Toronto
" 11	" .....	42649	W. E. Humphries, London..	1½ "	27	Davies Co., Toronto.....
" 11	" .....	42650	Pinney Bros. & McIntosh, London.	1½ "	26	Ingersoll Packing Co., Ingersoll.
" 11	" .....	42651	J. Straitch, London.....	1½ "	27	Unknown .....
" 11	" .....	42652	Mrs. Geo. Armstrong, London	1½ "	27	Davies Co., Toronto.....
DISTRICT OF MANITOBA—						
Sept. 13	Lard .....	39811	S. Goddard, Winnipeg.....	1½ "	25	J. Y. Griffin & Co., Winnipeg
" 14	" .....	39812	W. B. Francis, Winnipeg....	1½ "	30	Gordon & Ironside, Winnipeg
" 14	" .....	39813	Moffet & Douglas, Winnipeg	1½ "	27	" .....
" 21	" .....	39814	J. Bower & Co., Brandon....	1½ "	30	Gallagher, Holman & Lafrance, Winnipeg.
" 24	" .....	39815	W. A. Bartram Winnipeg..	1½ "	30	Gordon & Ironside, Winnipeg
DISTRICT OF CALGARY—						
Sept. 14	Lard. ....	35622	P. Burns & Co., Calgary....	1½ lb.	60	Vendors.....
" 14	" .....	35623	C. Wourull & Co., Calgary .	1½ "	50	J. Y. Griffin & Co., Calgary.
" 14	" .....	35624	Farmers Meat Market, Calgary.	1½ "	60	" .....
" 15	" .....	35625	Dominion Meat Co. Ltd., Calgary.	1½ "	55	Vendors.....
" 15	" .....	35626	P. Burns & Co. Wholesale, Calgary.	1½ "	30	" .....



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## LARD.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS					Number of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Iodine Number. (Hanus.)	Butyro Re- fractometer at 40° C.	Melting point of Solid Glycerides.	Halphen Reaction.		

T. KIDD, INSPECTOR.

	p.c.						
.....	None..	58·7	50·3	62·7	None....	30845	Genuine.
.....	" ..	61·8	51·0	64·6	" .....	30855	"
.....	" ..	57·8	50·1	64·3	" .....	30860	"
.....	" ..	61·2	50·7	64·1	" .....	30865	"
.....	" ..	57·8	50·0	63·7	" .....	30866	"

JNO. TALBOT, INSPECTOR.

Family Lard. This Lard withdrawn from sale by Mr. Clark.	0·28	54·4	50·2	63·3	Faint pink	42648	Genuine.
Davies Pure rendered Lard	None...	59·1	50·1	64·4	None.....	42649	"
Labelled Pure Lard with Beef Fat.	" ..	53·6	49·5	62·3	" .....	42650	"
.....	" ..	56·8	49·9	64·4	" .....	42651	"
Pure Lard .....	" ..	59·4	50·4	64·2	" .....	42652	"

A. C. LARIVIERE, INSPECTOR.

.....	None...	64·8	51·4	61·7	Light red.	39811	Genuine.
.....	0·16	62·6	50·9	62·0	Pink. ....	39812	"
.....	0·12	61·4	50·9	62·5	" .....	39813	"
.....	None...	61·4	50·9	63·8	" .....	39814	"
.....	" ..	59·6	50·5	61·6	" .....	39815	"

R. W. FLETCHER, INSPECTOR.

.....	0·12	64·2	51·1	64·2	None....	35622	Genuine.
.....	None...	68·1	52·0	62·1	Deep red..	35623	Contains Cotton seed oil. Adulterated.
.....	" ..	64·8	51·3	64·0	None.....	35624	Genuine.
.....	0·14	63·2	51·0	64·4	" .....	35625	"
.....	0·14	63·5	51·0	64·6	" .....	35626	"







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LARD.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.					Number of Sample.	Remarks and Opinion of the Chief Analyst.
	Water.	Iodine Number. (Hanus.)	Butyro Re- fractometer at 40° C.	Melting point of Solid Glycerides.	Halphen Reaction.		

J. F. POWER, INSPECTOR.

	p. c.						
'Wild Rose' Brand Label- led Pure.	None...	65.3	51.2	64.2	Faint pink	37763	Genuine.
Guaranteed Absolutely Pure.	"	68.3	51.9	64.4	"	37764	"
'Shamrock' Brand.	"	66.2	51.2	64.4	None	37765	"
"	"	79.1	54.1	61.2	Deep red..	37766	Contains Cotton seed oil. Adulterated.
"	"	59.8	50.5	61.9	None.....	37767	Genuine.

D. O'SULLIVAN, INSPECTOR.

Labelled Pure Lard.....	None...	65.4	51.4	64.1	None	41569	Genuine.
Labelled 'Griffins' Pure Lard.	0.12	65.4	51.2	64.5	"	41570	"
'Wild Rose' Pure Lard...	None..	67.5	51.5	64.5	Light pink	41571	"
Labelled Pure Lard..	"	67.1	51.6	63.6	Light red.	41572	"
"	"	64.7	51.2	62.7	None	41573	"
"	None	52.0	49.0	63.9	None.		







APPENDIX O.

BULLETIN No. 194—FRUIT JAMS.

OTTAWA, December 14, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—In July of this year an order was issued for the collection of ten (10) samples of Fruit Jams, in each of the (15) Inspectoral Districts of Canada. Our Inspectors were instructed to procure strawberry and raspberry jams by preference. The following table shows the character of the collection made :—

District.	Jams.	Compounds.	Canned Fruit.	Total.
Nova Scotia.....	10	0	0	10
Prince Edward Island.....	3	7	0	10
New Brunswick.....	7	3	0	10
Quebec.....	1	2	7	10
St. Hyacinthe.....	9	0	1	10
Montreal.....	7	3	0	10
Ottawa.....	10	0	0	10
Kingston.....	8	2	0	10
Toronto.....	10	0	0	10
London.....	7	4	0	11
Windsor.....	10	0	0	10
Manitoba.....	10	0	0	10
Calgary.....	10	0	0	10
Vancouver.....	9	1	0	10
Victoria.....	5	0	0	5
	116	22	8	146

Thirty samples which do not meet the requirements of this inspection, being labelled and sold as Compounds, or being *Canned Fruit*, and not jam, are excluded from this report. Of the 116 samples sold as jam, the following are the results of analysis :—

	Samples.
Found genuine. ....	108
“ doubtful.....	7
“ adulterated. ....	1
Total.....	116

No. 975 is a very old sample, which has evidently been kept in a hot place; and not being perfectly sealed, has dried so as to be unfit for use.  
Nos. 41273, 41277, 35988, 35991, 978, 983.—These samples contain dextrin, and are evidently made with addition of glucose, but in small quantity. It is an open



1 GEORGE V., A. 1911

question whether or not the addition of small amounts of glucose without declaration of the fact is permissible in jams. Some manufacturers consider the use of five to ten per cent of glucose as desirable, to prevent the separation of sugar by crystallization on long keeping. This question should be determined. The fact that many of the best makers of fruit jam do not use glucose seems to point to the needlessness of introducing even small amounts of the article into jam.

No. 36797. This sample contains a considerable amount of glucose. On account of the very variable nature of commercial glucose the actual amount present can only be approximated, and is at least 20 per cent.

It is true that no legal definition of jam, or explicit standard for the article as required by Section 26 of the Adulteration of Food Act, yet exists for Canada. Nevertheless the meaning of jam as 'a conserve of fruit, boiled in mass, with sugar and water,' is so well recognized; and the term has legal meaning in so many countries, that I have no hesitation in declaring a product made with more than ten per cent of glucose, as adulterated under the Act.

The following definition for jam is submitted for criticism and comment; and it is hoped that a legal definition and standard for this important article will be established before another collection is made:

*Jam*, (marmalade) is the sound product made from clean, sound, properly matured and prepared fresh fruit and sugar (sucrose) by boiling to a pulpy or semi-solid consistence, and conforms in name to the fruit used, and in its preparation not less than forty-five (45) pounds of fruit are used to each fifty-five (55) pounds of sugar.

*Jam* may be made with glucose instead of sugar, in whole or in part; and with admixture of other fruits than that which gives its name to the article, so long as the fruit so added does not exceed fifty (50) per cent of the total weight of fruit present, and provided that the word *Compound* is printed on the label, as an integral part of the same, and in letters as large as those which name the fruit of which the jam purports to be essentially made.

Section 24 (d) of the Adulteration Act provides that no food shall be deemed to be adulterated when 'Articles of food not injurious to the health are mixed together as a compound, and sold or offered for sale as such, with each package, roll, parcel or vessel containing such articles distinctly labelled as a mixture in conspicuous characters forming an inseparable part of a general label bearing the name and address of the manufacturer. 53 V., c. 26, s. 1; 61 V., c. 24, ss. 2 and 3.'

I inclose with this, for your inspection, the labels taken from the following samples of the present collection, viz.:—40262, 30808, 30699, 30690, 36799, 36798, 38570, 38564, 39526, 41181, 38561, 39535, 38568, 40264, 38562 and 40265, in all of which I am of opinion that the requirements of the Adulteration Act are not fairly met: either because of the smallness of the type used, or the want of proper background (see 38564 and 39526) which makes the word 'Compound' indistinct. The labels 38565, 37700, 30810, 38567 and 41180 contain the word 'Mixture' or 'Compound' in distinct lettering; but in the first two cases, it is placed in such a way as to escape ready notice. I would respectfully advise the adoption of a ruling, something like that authorized for Germany, in regard to which I quote from the Second Edition of the 'Deutsches Nahrungsmittelbuch' 1909, page 283:—

1. Every declaration must be placed on the same side of the package on which the content of the package is printed.
2. The declaration may be printed on the main label, or on a special label; but in the latter case, this special label must be affixed directly above or below the main label.
3. In the labelling of Compound Jams, no word on the label must be printed in larger characters than the word 'Compound'.
4. In case of the word 'Compound' being printed on the main label, it must be placed directly over or under the name of the jam, and parallel with this.



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5. The word 'Compound' must be printed in an easily legible and dark lettering, upon a light background.
6. If the normal contents of a jam are specially emphasized on the label, this must not be done in a larger type than the word 'Compound'.
7. On containers more than 16 cm. ( $6\frac{1}{2}$  inch.) high, the small letters must be 3 mm. ( $\frac{1}{8}$  inch.), and on larger containers 5 mm. ( $\frac{3}{16}$  inch.) in height

I beg to recommend the publication of this report as Bulletin No. 194.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.		

DISTRICT OF NOVA SCOTIA—

1909.							
Aug.	3	Fruit Jam..	41711 S.M.Lockhart & Co., New Glasgow, N.S.	3 jars.	30	W. P. Hartley, Lon- don, Eng.	Strawberrywithgoose- berry juice added.
"	4	" ..	41712 Ryan Bros., Truro, N.S.	3 " .	75	T. Lipton, London, Eng.	Pure Strawberry.....
"	4	" ..	41713 H. W. Ryan & Co., Truro, N.S.	3 " .	60	Simcoe Canning Co., Simcoe, Ont.	" " .....
"	11	" ..	41714 Wm. Law & Co., Yarmouth, N.S.	3 " .	54	Aylmer Canning Co., Aylmer, Ont.	" Raspberry. ....
"	11	" ..	41715 Lovitt & Lovitt, Yar- mouth, N.S.	3 " .	60	E. D. Smith, Winona, Ont.	" Strawberry. ....
"	13	" ..	41716 Bauld Bros. & Co., Ltd., Halifax, N.S.	3 " .	50	Crosse & Blackwell, London, Eng.	" Raspberry. ....
"	13	" ..	41717 John Tobin & Co., Halifax, N.S.	3 " .	85	Heinz & Co., Pitts- burgh, Pa.	" Strawberry. ....
"	13	" ..	41718 J. Frank Crowe & Co., Halifax, N.S.	3 " .	65	C. & E. Morton, London, Eng.	" " .....
"	13	" ..	41719 Wentzell, Ltd., Hali- fax, N.S.	3 " .	75	W. P. Hartley, Lon- don, Eng.	" Raspberry and gooseberry.
"	13	" ..	41720 J. S. Creed, Halifax, N.S.	3 " .	75	Thos. Lipton, Lon- don, Eng.	" Raspberry. ....

DISTRICT OF PRINCE EDWARD ISLAND—

July	19	Fruit Jam..	38561 J. A. Farquharson, Charlottetown.	3 bots.	30	Ozo Manufg. Co., Montreal.	Strawberry Compound
"	19	" ..	38562 John McKenna, Charlottetown.	3 " .	30	J. A. Lytle & Co., Toronto, Ont.	Raspberry " ..
"	21	" ..	38563 J. D. Hume, Murray River.	3 " .	42	R. F. Maddigan, Charlottetown.	Pure Raspberry.....
"	21	" ..	38564 A. M. Ross, Murray River.	3 " .	45	J. W. Windsor, Montreal.	Raspberry Compound
"	26	" ..	38565 P. A. Smith, Char- lottetown.	3 " .	36	Aylmer Canning Co., Canada.	Strawberry " ..
"	27	" ..	38566 P. A. McKenzie, Hunter River.	3 " .	36	Vendor .....	Pure Strawberry.....
"	27	" ..	38567 E. Campbell, North Wiltshire.	3 " .	36	T. Upton & Co., Hamilton.	Raspberry Compound
"	28	" ..	38568 Waugh & Steeves, Summerside.	3 " .	36	The Simcoe Canning Co., Simcoe, Ont.	Strawberry " ..
"	28	" ..	38569 R. T. Holman, Ltd., Summerside.	3 " .	60	J. W. Windsor, Mont- real.	" " " Balmoral Brand."
"	28	" ..	38570 G. W. Warren, Sum- merside.	3 " .	36	Hudon, Hebert & Co., Montreal.	Strawberry Compound



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FRUIT JAMS.

SOLIDS PER CENT.				RESULTS OF ANALYSIS.									Number of Sample.	Remarks and Opinion of the Chief Analyst.
Insoluble.	Soluble.	Total.	Water.	Polarization (Normal Solution).			Residual Cane Sugar.	Soluble matter other than Cane Sugar.	Preservatives.	Dyes.	Microscopical Examination.			
				Direct.	Invert.	Difference.								
R. J. WAUGH, INSPECTOR.														
p. c.	p. c.	p. c.	p. c.				p. c.	p. c.						
6.52	66.04	72.56	27.44	+28.7	-20.8	49.5	36.6	29.44	None...	None...	Strawberry tissues	41711	Genuine.	
9.44	62.34	71.78	28.22	+18.7	-18.4	37.1	27.4	34.90	" ..	" ...	" ...	41712	"	
13.43	53.70	67.13	32.87	+11.0	-17.5	28.5	21.1	32.60	" ..	" ...	" ..	41713	"	
7.83	56.18	64.01	35.99	+7.5	-20.3	27.8	20.6	35.58	" ..	Present.	Raspberry tissues	41714	" but dyed	
4.40	64.14	68.54	31.46	+6.1	-19.9	26.0	19.3	44.84	" ...	None...	Strawberry tissues	41715	Genuine.	
10.57	56.52	67.09	32.91	+8.4	-19.8	28.2	20.8	35.72	" ..	" ...	Raspberry tissues	41716	"	
7.83	64.18	72.01	27.99	+16.4	-15.0	31.4	23.3	40.88	" ..	" ...	Strawberry tissues	41717	"	
7.48	60.42	67.90	32.10	+10.1	-19.0	29.1	21.7	38.72	" ...	" ...	" ..	41718	"	
3.26	65.40	68.66	31.34	+6.8	-20.6	27.4	20.3	45.10	" ...	" ..	Raspberry & gooseberry tissues	41719		
4.16	68.60	72.76	27.24	+20.8	-22.6	43.4	32.0	36.60	" ..	" ...	Raspberry tissues	41720	"	
THEO. MOORE, INSPECTOR.														
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38561	Marked 'Com-pound.'	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38562	"	
8.85	60.10	68.95	31.05	-8.8	-17.7	8.9	6.60	53.50	None...	None...	Raspberry tissues	38563	Genuine.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38564	Marked 'Com-pound.'	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38565	"	
4.91	52.60	57.51	42.49	-9.6	-13.8	4.2	3.1	49.50	None...	None...	Strawberry tissues	38566	Genuine.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38567	Marked 'Com-pound.'	
3.24	63.46	66.70	33.30	+74.9	+48.1	26.8	19.8	43.66	Salicylic acid.	Present.	Strawberry tissues	38568	"	
5.64	67.80	73.44	26.56	+14.3	-20.5	34.8	25.8	42.00	None...	None...	"	38569	Genuine.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38570	Marked 'Com-pound'	



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

DISTRICT OF NEW BRUNSWICK—

1909.

July 26	Fruit Jam..	39526	Baird & Peters, St. John, N.B.	3 jars.	25	J. W. Windsor, Montreal.	StrawberryCompound
Aug. 5	"	39527	Inches & Grimmer, St. Stephen, N.B.	3 "	75	Sugars & Canners Ltd., Montreal.	Raspberry 'Diamond Brand'.
5	"	39528	P. H. McKenna, St. Stephen, N.B.	3 "	75	W. P. Hartley, London, Eng.	Strawberry guaranteed absolutely Pure
10	"	39529	H. G. Nobles, Woodstock, N.B.	3 "	75	Chivers & Sons, Ltd., Histon, Cambridge	Raspberry with Fruit Jelly.
10	"	39530	J. Rankin Brown, Woodstock, N.B.	3 "	75	E. D. Smith, Winona Ont.	Strawberry...
17	"	39531	The Sussex Mercantile Co., Ltd., Sussex, N.B.	3 "	39	Ozo Co., Ltd., Montreal.	Raspberry Compound. real.
18	"	39532	The 2 Barkers Ltd., Moncton, N.B.	3 "	69	The Wm. Davies Co. Ltd., Toronto.	Raspberry.
18	"	39533	H. F. Dobson, Moncton, N.B.	3 "	60	Aylmer Canning Co. Ltd., Aylmer, Ont.	Strawberry.....
19	"	39534	A. J. Loggie, Chat ham, N.B.	3 "	60	E. D. Smith, Winona Ont.	Plum...
19	"	39535	M. Bannon, New castle, N.B.	3 "	45	Simcoe Canning Co., Simcoe, Ont.	StrawberryCompound

DISTRICT OF QUEBEC—

July 20	Fruit Jam..	36601	N. B. Laroche, St Croix Lotbinière.	3 bots.	45	Whitead & Turner, Quebec.	Raspberry.....
21	"	36602	J. B. Devillers, Edouard, Lotbinière	3 "	66	" " "	Strawberry.....
21	"	36603	M. M. S. Beaudet, St. Edouard Lotbinière.	3 "	40	Bedard & freres, Quebec.	"
21	"	36604	A. Paris, Lotbinière.	3 "	75	Whitead & Turner, Quebec.	"
22	"	36605	Jos. Gauvin, St. Jean Deschaillon.	3 "	60	Unknown.	"
22	"	36606	Alphonse Donville, St. Jean Deschaillon.	3 "	60	A. B. Dupuis, Quebec.	"
20	"	36797	W. Lafleur, St. Antoine de Tilly.	3 "	105	L. Letourneau, Quebec.	Raspberry.....
20	"	36798	P. Normand, St. Antoine de Tilly.	3 "	39	Unknown	Strawberry...
20	"	36799	"	3 "	39	"	Raspberry.....
20	"	36800	N. B. Laroche, St. Croix Lotbinière.	3 "	60	Whitead & Turner, Quebec.	Strawberry.....



## FRUIT JAMS.

[illegible]



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.		

DISTRICT OF ST. HYACINTHE—

1909.							
July 10	Fruit Jam..	975	O. Demers, La Providence, St. Hyacinthe.	3cans.	45	The Montreal Canning & Preserving Co., Montreal.	'Peach'. . . . .
" 19	" ..	976	J. Dagenais & Cie, Farnham.	3 jars.	105	E. D. Smith, Winona, Ont.	'Pure Raspberry'...
" 20	" ..	977	G. Dupuis, St. Jean.	"	30	Vendor .....	Strawberry .....
" 21	" ..	978	L. T. Trempe, Sorel.	"	75	The Ozo Co., Montreal.	" .....
" 22	" ..	979	Victoriaville Grocery Store, Victoriaville	3cans.	54	Miller Bros., Baltimore, Md.	Raspberry, guaranteed pure.
" 23	" ..	981	McRae Bros., Richmond.	3 glasses.	90	Lockerby Bros., Montreal.	Strawberry, 'Wagstaff.'
Aug. 3	" ..	982	A. H. Moore & Co., Magog.	3 "	65	Forbes Bros., Montreal.	Strawberry.....
" 4	" ..	983	A. Plamondon, St. Césaire.	3 "	45	The Ozo Co., Montreal.	Raspberry, guaranteed pure.
" 6	" ..	984	Raymond freres, St. Hyacinthe.	3 "	90	Crosse & Blackwell, England.	Strawberry.....
" 7	" ..	985	E. Chaput, L'Egypte	3 jars.	160	Vendor .....	Strawberry, guaranteed pure.

DISTRICT OF MONTREAL—

July 17	Fruit Jam..	40256	St. Louis Preserving Co., Ville St. Louis	3 jars.	40	Vendors.....	Raspberry, guaranteed pure.
" 17	" ..	40257	" ..	3 "	45	" .....	Strawberry, guaranteed pure.
" 20	" ..	40258	Mrs. Luke, Bleury St., Montreal.	3 "	60	Vendor .....	Strawberry, pure Homemade.
" 20	" ..	40259	" ..	3 "	60	" .....	Raspberry, pure Homemade.
" 22	" ..	40260	Richer & Page, Valleyfield, P.Q.	3 "	75	Sugars and Cannery Ltd., Montreal.	Raspberry, pure fruit.



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FRUIT JAMS.

SOLIDS PER CENT.				RESULTS OF ANALYSIS.								Number of Sample.	Remarks and Opinion of the Chief Analyst.
Insoluble.	Soluble.	Total.	Water.	Polarization (Normal Solution).			Residual Cane Sugar.	Soluble matter other than Cane Sugar.	Preservatives.	Dyes.	Microscopical Examination.		
				Direct.	Invert.	Differ. ence.							
J. C. ROULEAU, INSPECTOR.													
p. c.	p. c.	p. c.	p. c.				p. c.	p. c.					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	975	In bad condition. Should not have been sold. Doubtful
9.54	59.60	69.14	39.86	14.7	-15.4	0.7	0.5	59.10	None...	None...	Rasp- berry tissues	976	Genuine.
5.04	51.02	56.06	43.94	+ 2.1	-16.4	18.5	13.7	37.32	" ...	" ...	Straw- berry tissues	977	"
2.85	71.15	74.03	25.97	+49.5	- 3.2	52.7	38.9	32.28	" ...	Present.	"	978	Contains glucose & a dye. Doubtful
.....	†	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	979	Not a jam
6.89	27.28	34.17	65.83	+ 0.4	- 9.3	9.7	7.1	20.18	Salicylic acid.	None...	Straw- berry tissues	981	Genuine, but water content high, and contains a preservative.
6.55	56.86	63.41	36.59	+23.4	14.5	37.9	28.0	28.86	None...	Present.	"	982	Genuine, but dyed
3.45	67.62	71.07	28.93	+50.2	- 2.8	78.2	39.2	28.42	" ...	None...	Rasp- berry tissues	983	Contains glucose. Doubtful
9.20	58.28	67.48	32.52	+23.8	-16.8	40.6	29.9	28.38	" ...	" ...	Straw- berry tissues	984	Genuine.
3.70	38.94	47.64	52.36	+ 8.8	-16.3	25.1	18.5	20.44	" ...	" ...	"	985	Genuine, but water content high.
J. J. COSTIGAN, INSPECTOR.													
7.52	58.98	66.50	33.50	+21.5	7.9	29.4	21.7	37.28	Salicylic acid.	Present.	Rasp- berry tissues	40256	Genuine, but preservative and dye present.
4.99	73.32	78.31	21.69	+24.8	-11.2	36.0	26.8	46.52	"	"	Straw- berry tissues	40257	"
3.18	59.16	62.34	37.66	+ 2.5	-18.9	21.4	15.8	43.36	None...	None...	"	40258	Genuine.
10.06	54.94	65.00	35.00	- 0.7	-18.2	17.5	13.97	40.97	" ...	" ...	Rasp- berry tissues	40259	"
8.78	58.20	66.98	33.02	+11.0	-19.2	30.2	22.4	35.80	Salicylic acid.	Present.	"	40260	Genuine, but preservative and dye present.

\* Peach jam. Very old, dried out. Impossible to sample it. † Canned fruit, not a jam.



Date of Collection.	Nature of Sample.	Number of Samples.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.		
DISTRICT OF MONTREAL—							
1909.							
July 22	Fruit Jam...	40261	Richer & Page, Valleyfield, P.Q.	3 jars.	75	Sugars and Cannery, Ltd., Montreal.	Strawberry, pure fruit
" 27	"	40262	Alphonse Raymond, 40 Plessis, Montreal.	3 "	105	Vendor .....	Strawberry, pure.....
" 27	"	40263	" " " "	3 "	25	" .....	Raspberry.....
" 27	"	40264	Joseph Raymond & Co., St. Timothie St., Montreal.	3 "	25	" .....	" Compound..
" 27	"	40265	J. D. Boileau, Bonsecours St., Montreal.	3 "	30	L. Semetey's, Montreal.	" " ..
DISTRICT OF OTTAWA—							
Aug. 7	Fruit Jam.	41269	E. C. Armand, Arnprior.	3 bots.	75	Aylmer Canning Co. Aylmer, Ont.	Raspberry. Pure.....
" 11	"	41270	Downing Bros, Ottawa.	3 "	45	J. G. Whyte & Son., Ottawa.	Strawberry. Pure Fruit. 'Oval' Brand.
" 11	"	41271	J. J. Crosbie, Ottawa	3 "	75	Unknown	Strawberry Jam....
" 13	"	41272	Berman & Levinson, Ottawa.	3 "	45	J. G. Whyte & Son., Ottawa.	Raspberry. Pure Fruit 'Oval' Brand.
" 13	"	41273	McDonald Bros., Ottawa.	3 "	105	F. J. Castle Co., Ottawa.	Raspberry. Guaranteed pure. Ozo Co.
" 14	"	41274	J. McParland & Bros Gananoque.	3 "	45	W. G. Craig & Co., Kingston.	Strawberry preserves, guaranteed absolutely pure.
" 19	"	41275	E. A. Lisk, Eganville	3 "	60	F. J. Castle Co., Ottawa.	Raspberry.....
" 21	"	41276	W. West, Almonte.	3 "	75	Mathewson's Sons, Montreal.	" ..
" 23	"	41277	T. Lindsay Ltd., Ottawa.	3 "	60	Bate & Sons, Ottawa	Strawberry Jam.....
" 24	"	41278	Chelsea Trading Co. Ltd., Ottawa.	3 "	105	"	Raspberry Pure.....



## SESSIONAL PAPER No. 14

## FRUIT JAMS.

SOLIDS PER CENT.			RESULTS OF ANALYSIS.										Number of Sample.	Remarks and Opinion of the Chief Analyst.
Insoluble.	Soluble.	Total.	Water.	Polarization (Normal Solution).			Residual Cane Sugar.	Soluble matter other than Cane Sugar.	Preservatives.	Dyes.	Microscopical Examination.			
				Direct.	Invert.	Difference.								
J. J. COSTIGAN, INSPECTOR— <i>Concluded.</i>														
p. c.	p. c.	p. c.	p. c.				p. c.	p. c.						
4.62	64.50	69.12	30.88	+ 0.5	-21.0	21.5	15.9	48.60	Salicylic acid.	Present.	Strawberry tissues	40261	Genuine, but preservative and dye present.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40262	Marked Compound—but indistinctly.	
2.84	64.94	67.78	32.22	- 6.3	17.3	11.0	7.9	57.04	None...	None...	Strawberry tissues	40263	Genuine.	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40264	Sold as compound	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40265	"	

## J. A. RICKEY, INSPECTOR.

6.95	40.30	47.25	52.75	+ 9.1	-12.5	21.6	15.9	24.40	None...	None...	Raspberry tissues	41269	Genuine. water content high
4.84	67.34	72.18	27.82	+12.2	-20.3	32.5	24.1	43.24	Salicylic acid.	Present.	Strawberry tissues	41270	Genuine, but preservative and dye present.
6.21	67.12	73.33	26.67	+23.1	-20.5	43.6	32.2	34.92	None...	None...	"	41271	Genuine.
10.86	55.08	65.94	34.06	- 9.6	-15.4	5.8	4.3	50.78	Salicylic acid.	"	Raspberry tissues	41272	Genuine, but preservative present.
6.10	69.66	75.76	24.24	+25.0	-10.7	35.7	24.9	44.76	"	"	"	41273	A trace of dextrine and a preservative are present Doubtful.
5.40	60.48	65.88	34.12	+ 8.8	-22.2	31.0	22.9	37.58	None...	"	Strawberry tissues	41274	Genuine.
3.23	74.06	77.29	22.71	+12.7	-22.0	34.0	25.8	48.26	"	Present	Raspberry tissues	41275	Genuine, but dyed.
6.36	72.58	78.94	21.06	+ 1.8	19.8	21.6	15.9	56.68	"	"	"	41276	"
7.67	64.94	72.61	27.39	+29.7	-11.5	41.2	29.2	35.74	"	None...	Strawberry tissues	41277	Contains a small quantity of glucose Doubtful.
5.86	61.62	67.48	32.52	+ 5.8	19.4	25.2	18.2	43.42	Salicylic acid.	Present	Raspberry tissues	41278	Genuine, but preservative and dye present.



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity	Cents.		
DISTRICT OF KINGSTON							
1909.							
Aug. 6	Fruit Jam..	41172	G. Pearson, Belleville.	3 bots.	60	Belleville Fruit Vinegar.	Strawberry... ..
" 6	"	41173	" " "	3 "	60	" "	Raspberry. ....
" 6	"	41174	Wallbridge & Clarke, Belleville.	3 "	75	Crosse & Blackwell, London.	" ....
" 6	"	41175	" " "	3 "	75	" "	Strawberry.....
" 6	"	41176	W. D. Stephens, Port Hope.	3 "	60	Graman, Hamilton.	Currant.....
" 6	"	41177	" " "	3 "	60	" "	Raspberry.....
" 6	"	41178	F. H. Brown, Port Hope.	3 "	70	Winona, Ont.....	" ....
" 6	"	41179	" " "	3 "	75	Lipton, London....	Pineapple. . . .
" 6	"	41180	J. Dunfee, Port Hope	3 "	30	Upton, Hamilton...	Raspberry. ....
" 6	"	41181	" " "	3 "	30	Aylher. . . . .	Black Currant.....
DISTRICT OF TORONTO—							
Aug. 5	Fruit Jam..	41319	J. Usher & Son, St. David.	3 tins.	35	Vendors.....	Strawberry.....
" 6	"	41320	Canadian Canners, Ltd., Hamilton.	3 pks.	45	Simcoe Canning Co., Simcoe.	Strawberry preserves, pure.
" 6	"	41321	Wagstaffe, Ltd., Hamilton.	3 "	50	Vendors.....	Strawberry, pure....
" 9	"	41322	Mrs. A. Barthlett, Toronto.	3 "	35	Vendor .....	" ....
" 10	"	41323	E. D. Smith, Winona	3 "	60	" .....	" ....
" 6	"	41324	The Canada Preserving Co., Ltd., Hamilton.	3 "	48	Vendors.....	Raspberry, pure ....
" 6	"	41325	Aylmer Canning Co., Ltd., Hamilton.	3 "	55	" .....	" ....
" 6	"	41326	T. Upton Co., Ltd., Hamilton.	3 "	55	" .....	" ....
" 12	"	41327	The T. Eaton Co., Ltd., Toronto.	3 "	90	Sprague, Warner & Co., Chicago, Ill.	" ....
" 13	"	41328	The T. A. Lytle Co., Ltd., Toronto.	3 "	50	Vendors . . . . .	" ....



## SESSIONAL PAPER No. 14

## FRUIT JAMS.

SOLIDS PER CENT.				RESULTS OF ANALYSIS.								Number of Sample.	Remarks and Opinion of the Chief Analyst.
Insoluble.	Soluble.	Total.	Water.	Polarization (Normal Solution).			Residual Cane Sugar.	Soluble matter other than Cane Sugar.	Preservatives.	Dyes.	Microscopical Examination.		
				Direct.	Invert.	Difference.							
JAS. HOGAN, INSPECTOR.													
p. c.	p. c.	p. c.	p. c.				p. c.	p. c.					
5.17	66.98	72.15	27.85	+20.5	-4.9	25.4	18.8	48.18	None...	Present.	Strawberry tissues	41172	Genuine, but dyed
5.62	51.60	57.22	42.78	+8.8	-20.5	29.3	21.5	30.10	"...	"	Raspberry tissues	41173	"
5.27	64.00	69.27	30.73	-5.4	18.9	13.5	9.9	54.10	"...	None...	"	41174	Genuine.
8.42	64.78	73.20	26.80	+9.8	20.8	30.6	22.6	42.18	"...	"	Strawberry tissues	41175	"
5.46	49.68	55.14	44.86	+14.0	16.3	30.3	22.4	27.28	"...	"	Black Currant tissues.	41176	"
4.77	52.90	57.67	42.33	+17.5	-21.0	38.5	28.4	24.50	"...	"	Raspberry tissues	41177	"
3.90	62.86	66.76	33.24	+13.1	-20.5	33.6	24.8	38.06	"...	"	"	41178	"
5.32	49.76	55.08	44.92	+3.5	-15.4	18.9	13.9	35.86	"...	"	Pineapple tissues	41179	"
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41180	Sold as Compound.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41181	"

## H. J. DAGER, INSPECTOR.

9.24	52.78	62.02	37.98	-14.7	-16.1	1.4	1.0	51.78	None...	None...	Strawberry tissues	41319	Genuine.
7.07	50.94	58.01	41.99	+3.5	-15.0	18.5	13.7	37.24	"...	Present.	"	41320	" but dyed
11.33	57.16	68.49	31.51	+25.5	-17.2	42.7	31.6	25.56	Salicylic acid.	"	"	41321	Genuine, but preservative and dye present.
2.55	66.20	68.75	31.25	-5.2	-20.5	15.3	11.3	54.90	None...	"	"	41322	Genuine, but dyed
4.72	63.30	68.02	31.98	+7.0	-20.8	27.8	20.6	42.70	"...	None...	"	41323	Genuine.
8.71	45.16	53.87	46.13	+17.8	-18.5	36.3	26.8	18.36	"...	"	Raspberry tissues.	41324	Genuine; water content high.
6.74	62.64	69.38	30.62	+7.4	-18.9	26.0	19.4	43.24	"...	"	"	41325	Genuine.
9.19	39.94	49.13	50.87	+8.9	-17.3	26.2	19.4	20.54	"...	"	"	41326	" but water content high.
4.97	62.66	67.63	32.37	-5.2	-19.2	14.0	10.3	52.36	"...	"	"	41327	Genuine.
8.04	61.14	69.18	30.82	+32.5	-18.7	51.2	37.9	23.24	"...	Present.	"	41328	" but dyed



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

DISTRICT OF LONDON—

1909.							
July 21	Fruit Jam..	30683	A. McCrea, Guelph.	3 jars.	75	E. D. Smith, Winona, Ont.	Strawberry ... ..
" 21	"	30684	Geo. Williams, Guelph.	3 "	60	Upton & Co., Hamilton.	" ....
" 23	"	30689	A. Beattie & Co., Stratford.	3 "	75	Rose Leplant, Montreal.	" ..
" 23	"	30690	Frank Lloyd, Stratford.	3 "	45	J. Littell & Co., Toronto.	Raspberry.....
" 23	"	30691	James Lloyd, Stratford.	3 "	45	Vendor. ....	Strawberry. ....
" 23	"	30694	Barnsdale Trading Co., Stratford.	3 "	45	Simcoe Canning Co., Simcoe.	" ....
" 26	"	30699	R. H. Cutt, Goderich	3 "	30	Elliot, Mar & Co., London, Ont.	" ....
" 21	"	30805	Richard Smith, Seaforth.	3 cups	45	John Slone, Toronto	Raspberry. ....
" 27	"	30808	A. G. Ault, Seaforth	3 jars.	30	Aylmer Canning Co., Aylmer, Ont.	Currant.....
" 29	"	30810	H. Bartleff, Clinton.	3 "	30	Upton & Co., Hamilton	GooseberryCompound
" 29	"	30811	" "	3 cups	45	Unknown.....	Raspberry.....

DISTRICT OF WINDSOR—

July 26	Fruit Jam..	35985	Jas. Mahon, London, East.	3 jars.	45	Simcoe Canning Co., Simcoe.	Strawberry. ....
" 26	"	35987	Elliott Mar & Co., London.	3 "	50	J. W. Windsor, Montreal.	Raspberry.....
" 26	"	35988	" "	3 "	50	" "	Strawberry.....
" 26	"	35989	T. A. Rowat, London	3 "	75	Crosse & Blackwell, London, Eng.	Raspberry ... ..
" 26	"	35990	" "	3 "	75	Goodwillie & Son., Welland.	Strawberry.....
" 26	"	35991	Gorman Eckert & Co., London.	3 "	....	Vendors.....	" ....



SESSIONAL PAPER No. 14  
 FRUIT JAM.

SOLIDS PER CENT.			RESULTS OF ANALYSIS.								Number of Sample.	Remarks and Opinion of the Chief Analyst.	
Insoluble.	Soluble.	Total.	Water.	Polarization (Normal Solution).			Residual Cane Sugar.	Soluble matter other than Cane Sugar.	Preservatives.	Dyes.			Microscopical Examination.
				Direct.	Invert.	Difference.							

## T. KIDD, INSPECTOR.

p. c.	p. c.	p. c.	p. c.				p. c.	p. c.					
6.61	50.20	56.81	43.19	- 2.1	21.9	19.8	14.6	35.60	None...	None...	Strawberry tissues.	30683	Genuine.
6.59	58.84	65.43	34.57	+ 7.3	-18.4	25.7	19.0	39.84	" ...	" ...	"	30684	"
2.88	70.42	73.30	26.70	+15.6	-12.2	27.8	19.5	50.92	" ...	" ...	"	30689	"
...	...	...	...	...	...	...	...	...	...	...	...	30690	Sold as Compound.
3.22	59.16	62.38	37.62	0.0	-16.1	16.1	11.9	47.26	None...	None...	Strawberry tissues.	30691	Genuine.
7.22	66.06	73.28	26.72	+37.1	-22.0	59.1	43.7	22.36	" ...	" ...	"	30694	"
...	...	...	...	...	...	...	...	...	...	...	...	30699	Sold as Compound.
9.37	56.08	65.45	34.55	-13.4	-18.5	5.1	3.7	52.38	Salicylic acid.	Present.	Raspberry tissue.	30805	Genuine, but contains preservative and dye.
...	...	...	...	...	...	...	...	...	...	...	...	30808	Sold as Compound.
...	...	...	...	...	...	...	...	...	...	...	...	30810	"
6.74	59.24	65.98	34.02	+ 0.7	-17.3	18.0	13.3	45.94	None...	None...	Strawberry tissues.	30811	Genuine.

## JNO. TALBOT, INSPECTOR.

6.61	65.30	71.91	28.09	+30.0	-22.0	52.0	38.6	26.70	None...	None...	Strawberry tissues	35985	Genuine.
7.76	62.68	70.44	29.56	0.0	-23.1	23.1	17.0	45.68	" ...	" ...	Raspberry tissues	35987	"
4.75	66.90	71.65	28.35	+31.9	- 5.2	37.1	28.5	38.40	" ...	" ...	Strawberry tissues	35988	A trace of dextrine. Doubtful
8.94	58.90	67.84	32.16	0.0	-19.1	19.1	14.0	44.90	" ...	" ...	Raspberry tissues	35989	Genuine.
7.51	44.74	52.25	47.75	+ 0.4	-13.3	13.7	10.0	34.74	Salicylic acid.	Present.	Strawberry tissues	35990	Genuine, but contains a preservative and a dye: water content is high.
5.41	72.68	78.09	21.91	+30.6	-14.7	45.3	33.5	39.30	None...	"	"	35991	A trace of dextrine and a dye. Doubtful



Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report (Is not an expression of opinion).
				Quantity.	Cents.		

DISTRICT OF WINDSOR—

1909.							
July 27	Fruit Jam..	35992	C. A. O'Neill, Ingersoll.	3 "	25	Upton & Co., Hamilton.	Orange Marmalade..
" 27	" ..	35993	F. Williams, Woodstock.	3 "	75	W. P. Hartly, London, Eng.	Raspberry ..
" 27	" ..	35994	Poole & Co., Woodstock.	3 "	38	E. D. Smith, Winona Ont.	Green Gage....
" 28	" ..	35997	McCormick Mfg. Co. London.	3 "	35	Vendors .....	Red Currant .....

DISTRICT OF MANITOBA—

July 21	Fruit Jam..	39751	G. F. & J. Galt, Winnipeg.	3 pkgs	60	Vendors .....	Raspberry ..
" 21	" ..	39752	" ..	3 "	55	" .....	Strawberry.. ..
" 21	" ..	39753	K. MacKenzie & Co. Winnipeg.	3 "	60	Crosse & Blackwell, London, Eng.	" .....
" 21	" ..	39754	The Codville Co., Winnipeg.	3 "	55	W. P. Hartley, Liverpool & London.	" .....
" 21	" ..	39755	" ..	3 "	50	John Buchanan & Bros. Ltd., Glasgow.	Raspberry. ....
" 22	" ..	39756	A. Macdonald & Co. Winnipeg.	3 "	49	E. D. Smith, Winona Ont.	" .....
" 22	" ..	39757	" ..	3 "	56	Maconachie Bros., London, Eng.	" .....
" 22	" ..	39758	" ..	3 "	45	E. D. Smith, Winona Ont.	Strawberry.....
" 22	" ..	39759	Thos. H. Lock & Co. Winnipeg.	3 "	50	Robertson's, Paisley, Manchester & London.	" .....
" 22	" ..	39760	" ..	3 "	50	Miller & Co., Belfast Ireland.	" .....

DISTRICT OF CALGARY—

Aug. 3	Fruit Jam..	35588	L. B. Cochrane, Medicine Hat.	3 bots.	100	Chevies & Sons, Ltd., Cambridge, Eng.	Strawberry.....
" 3	" ..	35589	D. Milne Co., Ltd.	3 "	90	Crosse & Blackwell, London, Eng.	Raspberry.....
" 3	" ..	35590	R. Dunn, Medicine Hat.	3 "	100	Empress Mfg. Co., Vancouver.	Strawberry.....



SESSIONAL PAPER No. 14  
FRUIT JAMS.

SOLIDS PER CENT.				RESULTS OF ANALYSIS.								Number of Sample.	Remarks and Opinion of the Chief Analyst.
Insoluble.	Soluble.	Total.	Water.	Polarization (Normal Solution).			Residual Cane Sugar.	Soluble matter other than Cane Sugar.	Preservatives.	Dyes.	Microscopical Examination.		
				Direct.	Invert.	Difference.							

JNO. TALBOT, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.	p. c.				p. c.	p. c.					
3.14	62.70	65.84	34.16	+41.3	-19.2	60.5	44.8	17.90	None...	None...	Orange marmalade.	35992	Genuine.
4.06	67.84	71.90	28.10	+11.2	-21.7	32.9	24.2	43.64	" ...	" ...	Rasp-berry tissues	35993	"
4.93	58.00	62.93	37.07	- 6.3	-13.5	7.2	5.3	52.70	" ...	" ...	Plum tissues	35994	"
10.47	59.04	69.51	30.49	+ 2.3	- 5.2	7.5	5.5	53.54	" ...	" ...	Red Currant tissues.	35997	"

A. C. LARIVIERE, INSPECTOR.

3.31	69.06	72.37	27.63	+19.6	-21.0	40.6	30.0	39.06	None...	Present.	Rasp-berry tissues	39751	Genuine, but dyed.
2.52	64.06	66.58	33.42	+30.9	-18.4	49.3	36.4	27.66	" ...	" ...	Straw-berry tissues	39752	"
5.70	61.74	67.44	32.56	+22.4	18.9	41.3	30.5	31.24	" ...	None...	"	39753	Genuine.
4.01	79.44	83.45	26.55	+26.9	-19.8	46.7	34.5	44.94	" ...	" ...	"	39754	"
6.06	73.34	79.40	20.60	+15.7	-18.9	34.6	25.7	47.64	" ...	" ...	Rasp-berry tissues	39755	"
3.21	62.67	65.88	34.12	+14.0	-24.5	38.5	28.5	34.17	" ...	" ...	"	39756	"
4.55	70.36	74.91	25.09	+ 9.1	-24.5	33.6	24.8	45.56	" ...	Present.	"	39757	"
4.08	51.14	55.22	44.78	- 1.8	-20.8	19.0	14.1	37.04	" ...	None...	Straw-berry tissues	39758	Genuine.
5.78	66.38	72.16	27.84	+16.6	-22.7	39.3	29.1	37.28	" ...	Present.	"	39759	"
3.61	70.56	74.17	25.83	+18.7	- 8.4	27.1	20.0	50.56	" ...	None...	"	39760	Genuine.

R. W. FLETCHER, INSPECTOR.

4.98	69.58	74.56	25.44	+21.5	-19.9	41.4	30.6	38.78	None...	None...	Straw-berry tissues.	35588	Genuine.
6.56	61.50	68.06	31.94	- 3.3	-19.2	15.9	11.7	49.80	" ...	" ...	Rasp-berry tissues.	35589	"
5.80	66.86	72.66	27.34	+30.5	-22.2	52.7	37.9	28.96	Benzoic acid.	Present.	Straw-berry tissues.	35590	Genuine, but with preservative and a dye.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

DISTRICT OF CALGARY—

1909							
Aug. 5	Fruit Jam..	35591	Hudson Bay Co., Lethbridge.	3 tins.	75	Robertson, Paisley, Manchester and London.	Raspberry Jam . . .
" 5	"	35592	H. Bentley Co., Lethbridge.	3 lots.	75	Wagstaff, Ltd., Hamilton.	Strawberry.....
" 10	"	35593	Douglas Bros., Edmonton.	3 "	100	Thos. Lipton, London, Eng.	" . . . . .
" 10	"	35594	Hudson Bay Co., Edmonton.	3 "	60	Simcoe Canning Co., Simcoe.	" . . . . .
" 11	"	35595	Acme Co., Ltd., Edmonton.	3 "	90	Wagstaff, Ltd., Hamilton.	Raspberry.....
" 10	"	35596	J. H. Morris & Co., Edmonton.	3 "	90	Empress Mfg. Co., Vancouver.	Strawberry . . .
" 11	"	35597	L. & W. Campbell, Edmonton.	3 "	75	Crosse & Blackwell, London, Eng.	Raspberry. . .

DISTRICT OF VANCOUVER

July 26	Fruit Jam..	37696	Empress Mfg. Co., Vancouver.	3 pks.	75	Vendors.. . . . .	Raspberry, guaranteed absolutely pure.
" 26	"	37697	R. Schilling, Vancouver.	3 "	70	Jas. Robertson & Sons, Paisley, Scot	Strawberry . . .
" 26	"	37698	Kelly, Douglas & Co., Vancouver.	3 "	60	Jas. Keiller & Sons, Ltd., Dundee.	" . . . . .
" 26	"	37699	Hudson Bay Co., Vancouver.	3 tins.	40	Crosse & Blackwell, London, Eng.	" . . . . .
" 26	"	37700	E. W. Leeson, Vancouver.	3 "	100	Climax Mfg. Co., Vancouver.	" . . . . .
" 26	"	37701	W. H. Malkin & Co., Vancouver.	3 jars.	45	Chuvers & Sons, Ltd., Cambridge.	Raspberry, with fruit jelly.
" 26	"	37702	W. J. McMillan & Co., Vancouver.	3 tins.	45	Taylor Bros., Sydney, Australia.	Raspberry, guaranteed absolutely pure.
" 27	"	37703	Adams & Dean, Westminster.	3 "	50	Sugars and Cannery, Ltd., Montreal.	Strawberry.....
" 28	"	37704	H. A. Edgett & Co., Vancouver.	3 "	100	Vendors . . . . .	" . . . . .
" 28	"	37705	Woodwards' Stores, Vancouver.	3 "	75	C. & E. Morton, London, Eng.	Raspberry . . . . .



## SESSIONAL PAPER No. 14

## FRUIT JAMS

SOLIDS PER CENT.			RESULTS OF ANALYSIS.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
Insoluble.	Soluble.	Total.	Water.	Polarization (Normal Solution.)			Residual Cane Sugar.	Soluble matter, other than cane sugar.	Preservatives.	Dyes.	Microscopical Examination.			
				Direct.	Invert	Difference.								
R. W. FLETCHER, INSPECTOR— <i>Concluded.</i>														
p.c.	p.c.	p.c.	p.c.				p.c.	p.c.						
3.76	65.40	69.16	30.84	+ 6.1	-21.0	27.1	20.0	45.40	None...	None...	Rasp- berry tissues.	35591	Genuine.	
6.38	59.26	65.64	34.36	+32.5	-19.6	52.1	38.6	20.66	Salicylic acid.	Present.	Straw- berry tissues.	35592	" but with preserva- tive and a dye.	
3.20	67.20	70.40	29.60	+ 1.7	-20.1	21.8	16.2	51.00	None...	None...	"	35593	Genuine.	
8.92	57.18	66.10	33.90	+29.0	-19.2	48.2	35.7	21.48	"	"	"	35594	"	
4.47	63.34	67.81	32.19	+ 21.0	-20.1	41.1	30.3	33.04	Salicylic acid.	Present.	Rasp- berry tissues.	35595	" but pre- servative and a dye present.	
3.61	66.42	70.03	29.97	+32.7	-21.5	54.2	40.0	26.42	None...	"	Straw- berry tissues.	35596	Genuine, but dyed.	
4.85	59.64	64.49	35.50	+ 4.4	-18.2	22.6	16.7	42.94	"	None...	Rasp- berry tissues.	35597	Genuine.	

## J. F. POWER, INSPECTOR.

3.57	71.76	75.33	24.67	+ 1.7	-21.5	23.2	17.2	54.56	None...	None...	Rasp- berry tissues.	37696	Genuine.
3.71	66.78	70.49	29.51	+19.2	-19.4	38.6	28.6	38.18	"	Present.	Straw- berry tissues.	37697	" but con- tains a dye.
11.00	63.26	74.26	25.74	+ 0.4	-16.6	17.0	12.5	50.76	"	None...	"	37698	Genuine.
3.95	63.70	67.70	32.39	+ 9.5	-15.4	24.9	18.4	45.30	"	"	"	37699	"
												37700	Sold as mixture.
5.15	66.64	71.79	28.21	- 7.4	22.6	15.2	11.3	55.34	None...	None...	Rasp- berry tissues.	37701	Genuine.
7.83	58.82	66.65	33.35	+ 2.6	-18.5	21.1	15.6	43.22	"	"	"	37702	"
3.85	71.54	75.39	24.61	- 2.1	-15.4	13.3	9.8	61.74	Salicylic acid.	Present.	Straw- berry tissues.	37703	Genuine, but con- tains a preserva- tive and dye.
6.34	61.16	67.50	32.50	+ 2.8	-19.2	22.0	16.3	44.86	None...	None...	"	37704	Genuine.
4.78	68.04	72.82	27.18	+17.8	-23.4	41.2	30.5	37.54	"	Present.	Rasp- berry tissues.	37705	" but dyed.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		
DISTRICT OF VICTORIA—							
1909							
Aug. 5	Fruit Jam	41526	Windsor Grocery Co., Victoria, B.C.	3 pks.	90	Crosse & Blackwell, London, Eng.	Raspberry. ....
" 5	"	41527	Fred. Carne, Victoria, B.C.	3 "	75	Wm. P. Hartley, London, Eng.	Strawberry .....
" 5	"	41528	Saunders Grocery Co., Ltd., Victoria, B.C.	3 "	75	Empress Mfg. Co., Vancouver.	Raspberry, 'Empress
" 5	"	41529	" "	3 "	75	" "	Strawberry, "
" 6	"	41530	D. H. Ross & Co., Victoria, B.C.	3 "	75	James Robertson & Sons, Paisley, Scot.	" 'Golden Shred.'



SESSIONAL PAPER No. 14  
FRUIT JAMS.

SOLIDS PER CENT.			RESULTS OF ANALYSIS.								No. of Sample.	Remarks and Opinion of the Chief Analyst.	
Insoluble.	Soluble.	Total.	Water.	Polarization (Normal Solution.)			Residual Cane Sugar.	Soluble matter, other than cane sugar.	Preservatives.	Dyes.			Microscopical Examination.
				Direct	Invert	Difference.							

D. O'SULLIVAN, INSPECTOR.

p.c.	p.c.	p.c.	p.c.					p.c.	p.c.					
10.50	60.08	70.58	29.42	+12.2	-19.4	31.6	23.0	37.08	None...	None...	Rasp- berry tissues.	41526	Genuine.	
7.37	55.36	62.73	37.27	+18.5	-18.4	36.9	27.3	28.06	" ...	" ...	Straw- berry tissues.	41527	"	
3.99	67.20	71.19	28.81	+21.7	-19.2	40.9	30.3	36.90	" ..	"	Rasp- berry tissues.	41528	"	
5.62	69.56	75.18	24.82	+23.6	-22.2	45.8	33.9	35.66	" ...	Present.	Straw- berry tissues.	41529	" but dyed.	
8.21	64.14	72.35	27.65	+26.8	-21.9	48.7	35.9	28.24	Salicylic acid.	"	"	41530	Genuine, but dyed and con- tains a preserva- tive.	



1 GEORGE V., A. 1911

## APPENDIX P.

## BULLETIN No. 195—CREAM OF TARTAR.

OTTAWA, December 18, 1909.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report upon 211 samples collected as Cream of Tartar, in September and October of this year. The subjoined table gives details of collection and of the results of analysis :—

Inspectoral Districts.	Genuine.	Adulterated.	Lost.	Total.
Nova Scotia .....	15	0	0	15
New Brunswick .....	11	3	1	15
Quebec .....	11	4	0	15
St. Hyacinthe .....	9	6	0	15
Montreal .....	9	6	0	15
Ottawa .....	14	1	0	15
Kingston .....	14	1	0	15
Toronto .....	11	4	0	15
London .....	16	0	0	16
Windsor .....	12	3	0	15
Manitoba .....	14	0	1	15
Calgary .....	15	0	0	15
Vancouver .....	14	1	0	15
Victoria .....	15	0	0	15
	180	29	2	211

One sample from New Brunswick was lost, owing to a train wreck; and one sample from Manitoba consisted of crushed sugar, sold by mistake.

All the inspectoral districts are represented except Prince Edward Island. The inspector for this district was absent, on leave.

It will be observed that more than 85 per cent of the samples collected prove to be genuine. Of this number, 50 samples, or nearly 24 per cent of the entire collection reach the standard of purity ( $97\frac{1}{2}$ ) per cent named in the British Pharmacopœia. Of genuine samples which fail to reach this high standard, only 16 fall below 90 per cent purity, and 3 below 88 per cent of purity. The lowest percentage of purity found in any genuine sample is 86.

I have already (Bull. 143) drawn your attention to the reasonableness of a somewhat lower standard for Commercial Cream of Tartar, as used in baking, &c., than that fixed by the British Pharmacopœia for the article as used in dispensing. This last is known as purified Cream of Tartar. The impurities present in crude argols, while reducing the quality of the article directly ground from them, are not harmful to health; and so long as they are not present in sufficient amount to destroy the value of the article as a baking material, they must be regarded as legitimate.

I believe that an examination of the report now placed in your hands will justify me in advising that a degree of purity represented by 90 per cent of actual bi-tartrate



## SESSIONAL PAPER No. 14

of potash, be made a legal minimum for Cream of Tartar. Only 16 samples, or 9 per cent of the number found to be genuine, fall below 90 per cent of purity; and a little care in the selection of the argols, and other forms of raw material to be ground, would easily prevent such grades as are represented by 86 to 89 per cent of purity from coming on the retail market.

Cream of Tartar has been inspected on several previous occasions by this department, and it is interesting to note a general improvement in the quality of the article.

Date of Inspection.	Percentage below 90 per cent of purity.
1887.....	73
1889.....	90
1896.....	30
1900.....	60
1905.....	62
1907.....	21
1909 (May).....	28
Present report.....	9

The substitution of alum, acid phosphate of lime, and mixtures of these, with starch, &c., cannot but be regarded as a fraud, when the mixture is sold as Cream of Tartar. Some of the substitutes for Cream of Tartar are possibly unobjectionable on the score of healthfulness, and their efficiency in bread making may be granted. They are of course intended to be sold at a lower price than Cream of Tartar. It will be seen by referring to the present report as well as to previous reports that the retail price of Cream of Tartar seems to vary from 30 to 40 cents a pound. It will be noted that very few of the substitutes for Cream of Tartar are offered at a lower price than this. If Cream of Tartar substitutes, or so-called Compound Cream of Tartars, are legally recognized, it can only be on condition of their being distinctly labelled to conform with Section 24 (d) of the Adulteration Act.

I beg to recommend the publication of this report as Bulletin 195.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF NOVA SCOTIA—

1909.						
Oct.	5 Cream of Tartar.	41801	Forristall & Co., Halifax, N.S.	3 pkgs.	30	John P. Mott & Co., Halifax, N.S.
"	5 " "	41802	J. L. Archibald & Son, Halifax, N.S.	3 " "	30	" " "
"	5 " "	41803	W. J. Hopgood & Son, Halifax, N.S.	3 " "	30	W. H. Schwartz & Sons, Halifax, N.S.
"	5 " "	41804	Jas. Hogan, Halifax, N.S.	8 ozs.	20	J. P. Mott & Co., Halifax, N.S.
"	5 " "	41805	J. D. Stewart, Halifax, N.S.	8 " "	20	W. H. Schwartz & Sons, Halifax, N.S.
"	5 " "	41806	E. Donahoe & Son, Halifax, N.S.	8 " "	18	" " "
"	5 " "	41807	R. B. Adams & Co., Halifax, N.S.	3 pkgs.	25	John P. Mott & Co., Halifax, N.S.
"	6 " "	41808	J. F. Crowe & Co., Halifax, N.S.	3 " "	18	" " "
"	6 " "	41809	Bauld Bros. & Co., Halifax, N.S.	3 " "	18	W. H. Schwartz & Sons, Halifax, N.S.
"	6 " "	41810	John Tobin & Co., Halifax, N.S.	3 " "	22	John P. Mott & Co., Halifax, N.S.
"	6 " "	41811	John P. Mott & Co., Halifax, N.S.	3 " "	...	Vendors.....
"	6 " "	41812	W. E. Crowe & Co., Halifax, N.S.	8 ozs.	20	Todhunter & Mitchell, Toronto.
"	6 " "	41813	B. H. Dodge, Kentville, N.S.	3 pkgs.	20	Nat. Drug & Chemical Co., Halifax, N.S.
"	8 " "	41814	Wentworth Stores, Windsor, N.S.	8 ozs.	...	W. H. Schwartz & Sons, Halifax, N.S.
"	8 " "	41815	M. N. Davison, Windsor, N.S.	3 pkgs.	25	White Swan Spice & Cereals Co., Ltd., Toronto.

DISTRICT OF NEW BRUNSWICK—

Sept.	7 Cream of Tartar.	39538	The Two Barkers, Ltd., St. John, N.B.	$\frac{1}{2}$ lb.	15	Vendors.....
"	7 " "	39539	M. E. Grass, St. John, N.B.	$\frac{1}{2}$ " "	18	Robert Greig Co., Toronto..
"	8 " "	39540	G. E. Barbour Co., Ltd., St. John, N.B.	$\frac{1}{2}$ " "	12	Vendors.....
"	15 " "	39541	Vanwart Bros., St. John, N.B.	$\frac{1}{2}$ " "	15	Geo. E. Barbour Co., Ltd., St. John, N.B.
"	21 " "	39542	W. R. Logan, Fredericton, N.B.	$\frac{1}{2}$ " "	15	A. F. Randolph & Son, Fredericton, N.B.
"	22 " "	39543	The Yerxa Grocery Co., Woodstock, N.B.	$\frac{1}{2}$ " "	13	The Robert Greig Co., Ltd., Toronto.
"	23 " "	39544	D. R. Bedell, Andover, N.B.	3 pkgs.	21	Geo. E. Barbour Co., Ltd., St. John, N.B.
"	24 " "	39545	Weaver & Co., Perth, N.B.	$\frac{1}{2}$ lb.	15	Baird & Peters, St. John, N.B.



## SESSIONAL PAPER No. 14

## CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Preliminary Examination.				Determinations.							
	Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.	Calcium Oxide.		

## R. J. WAUGH, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
Labelled pure	None	None.	None.	486	.....	.....	.....	.....	.....	.....	41801	Genuine, 91 p. c. purity.
"	"	"	"	466	.....	.....	.....	.....	.....	2.20	41802	Genuine, 88 p. c. purity.
Peerless. La- belled pure.	"	"	"	490	.....	.....	.....	.....	.....	.....	41803	Genuine, 92 p. c. purity.
Labelled pure	"	"	"	490	.....	.....	.....	.....	.....	.....	41804	Genuine, 92 p. c. purity.
Labelled strictly pure.	"	"	"	484	.....	.....	.....	.....	.....	.....	41805	Genuine, 91 p. c. purity.
.....	"	"	"	480	.....	.....	.....	.....	.....	.....	41806	Genuine, 90 p. c. purity.
Labelled pure.	"	"	"	490	.....	.....	.....	.....	.....	.....	41807	Genuine, 92 p. c. purity.
"	"	"	"	504	.....	.....	.....	.....	.....	.....	41808	Genuine, 94 p. c. purity.
Peerless. La- belled strictly pure.	"	"	"	488	.....	.....	.....	.....	.....	.....	41809	Genuine, 92 p. c. purity.
Labelled pure.	"	"	"	488	.....	.....	.....	.....	.....	.....	41810	Genuine, 92 p. c. purity.
"	"	"	"	484	.....	.....	.....	.....	.....	.....	41811	Genuine, 91 p. c. purity.
.....	"	"	"	508	.....	.....	.....	.....	.....	.....	41812	Genuine, 96 p. c. purity.
"Sovereign." Labelled pure.	"	"	"	484	.....	.....	.....	.....	.....	.....	41813	Genuine, 91 p. c. purity.
.....	"	"	"	484	.....	.....	.....	.....	.....	.....	41814	Genuine, 91 p. c. purity.
Labelled pure.	"	"	"	478	.....	.....	.....	.....	.....	2.00	41815	Genuine, 89 p. c. purity.

## J. C. FERGUSON, INSPECTOR.

.....	None.	None.	None	490	.....	.....	.....	.....	.....	.....	39538	Genuine, 92 p. c. purity.
.....	Pres't	Pres't	"	485	6.18	Maize	1.20	None.	9.68	6.80	39539	Adulterated.
"Acorn" brand	None.	None.	"	534	.....	.....	.....	.....	.....	.....	39540	Up to B. P. standard of purity.
.....	"	"	"	480	.....	.....	.....	.....	.....	.....	39541	Genuine, 90 p. c. purity.
.....	"	"	"	495	.....	.....	.....	.....	.....	.....	39542	Genuine, 93 p. c. purity.
.....	Pres't	Pres't	"	470	5.52	Maize	3.80	None.	12.70	9.00	39543	Adulterated.
"Acorn" brand strictly pure Cream of Tartar.	None.	None.	"	485	.....	.....	.....	.....	.....	.....	39544	Genuine, 91 p. c. purity.
"Reindeer" brand.	"	None.	"	480	.....	.....	.....	.....	.....	.....	39545	Genuine, 90 p. c. purity.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF NEW BRUNSWICK—

1909.						
Oct.	5 Cream of Tartar.	39546	W. B. McKay & Co., Sussex, N.B.	$\frac{1}{2}$ lb....	15	G. E. Barbour Co., Ltd., St. John, N.B.
"	6 " "	39547	G. A. Robertson, Moncton, N.B.	$\frac{1}{2}$ " ....	15	F. P. Reid & Co., Moncton, N.B.
"	7 " "	39548	Thos. Russell, Newcastle, N.B.	$\frac{1}{2}$ " ....	15	Baird & Peters, St. John, N.B.
"	7 " "	39549	James Mailer, Newcastle, N.B.	$\frac{1}{2}$ " ....	20	A. F. Randolph & Son, Fredericton, N.B.
"	9 " "	39550	S. Holdengraber, Bathurst, N.B.	$\frac{1}{2}$ " ....	15	F. P. Reid & Co., Moncton, N.B.
"	9 " "	39551	A. N. Desbrisay, Bathurst, N.B.	$\frac{1}{2}$ " ....	15	The Robert Greig Co., Ltd., Toronto.
"	11 " "	39552	McKenzie & Trueman, Campbellton, N.B.	$\frac{1}{2}$ " ...	20	Unknown

DISTRICT OF QUEBEC—

Sept.	6 Cream of Tartar.	36607	D. Lupien, Pont Maskinongé.	$\frac{1}{2}$ lb....	20	L. Chaput Fils & Cie., Montreal.
"	6 " "	36608	T. A. Bernier, Pont Maskinongé.	$\frac{1}{2}$ " ..	20	Lacaille & Gendreau, Montreal.
"	6 " "	36609	T. A. Deziel, Maskinongé.	$\frac{1}{2}$ " ..	20	L. Chaput Fils & Co., Montreal.
"	6 " "	36610	D. Vertefeuille, Maskinongé.	$\frac{1}{2}$ " ..	15	Unknown.
"	6 " "	36611	L. E. G. Dugas, Maskinongé.	$\frac{1}{2}$ " ..	18	L. Chaput Fils & Cie., Montreal.
"	6 " "	36612	O. Adam Fils, Maskinongé.	$\frac{1}{2}$ " ..	20	" " .....
"	7 " "	36613	D. Toupin, St. Justin.	$\frac{1}{2}$ " ..	20	Unknown.
"	7 " "	36614	W. H. Gagne, St. Justin.	$\frac{1}{2}$ " ..	20	" " .....
"	7 " "	36615	Lazare Vilneuve, St. Justin.	$\frac{1}{2}$ " ..	20	Robitaille, Montreal.
"	7 " "	36616	Augustin & Clement, St. Justin Bois, Blanc.	$\frac{1}{2}$ " ..	15	Lacaille & Gendreau, Montreal.
"	7 " "	36617	F. Marchand, St. Justin.	$\frac{1}{2}$ " ..	20	Unknown
"	8 " "	36618	Jos. Bergeron, St. Ursule.	$\frac{1}{2}$ " ..	20	Unknown.
"	8 " "	36619	P. Lessard, St. Ursule.	$\frac{1}{2}$ " ..	20	Unknown.
"	8 " "	36620	U. Boucher, St. Ursule.	$\frac{1}{2}$ " ..	20	Lacaille & Gendreau, Montreal.
"	8 " "	36621	T. E. Lupien, St. Ursule.	3 pkgs..	30	Laporte, Martin & Cie., Montreal.



SESSIONAL PAPER No. 14  
CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.										No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Preliminary Examination.				Determinations.							
	Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.	Calcium Oxide.		

J. C. FERGUSON, INSPECTOR—*Concluded.*

	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.	p. c.		
.....	Lost	in	transit.	.....	.....	.....	.....	.....	.....	.....	39546	Lost in transit.
.....	None.	None.	None.	466	.....	.....	.....	.....	.....	2.20	39547	Genuine, 88 p. c. purity.
"Reindeer" brand.	"	"	"	484	.....	.....	.....	.....	.....	.....	39548	Genuine, 91 p. c. purity.
Labelled pure ground Cream of Tartar.	"	"	"	484	.....	.....	.....	.....	.....	.....	39549	Genuine, 91 p. c. purity.
.....	"	"	"	474	.....	.....	.....	.....	.....	.....	39550	Genuine, 89 p. c. purity.
"White Swan" Mills.	"	"	"	494	.....	.....	.....	.....	.....	1.00	39551	Genuine, 93 p. c. purity.
.....	"	"	Pres't	514	.....	.....	.....	9.30	.....	.....	39552	Adulterated.

E. BELAND, INSPECTOR.

.....	None.	None.	None	532	.....	.....	.....	.....	.....	.....	36607	Up to B.P. standard of purity.
.....	"	"	"	475	.....	.....	.....	.....	.....	.....	36608	Genuine, 89 p. c. purity.
.....	"	"	"	485	.....	.....	.....	.....	.....	.....	36609	Genuine, 91 p. c. purity.
.....	Pres- ent.	Pres- ent.	Pres- ent.	300	44.84 Maize	1.40	12.00	3.80	9.80	.....	36610	Adulterated.
.....	None.	None.	None	490	.....	.....	.....	.....	.....	.....	36611	Genuine, 92 p. c. purity.
.....	"	"	"	485	.....	.....	.....	.....	.....	.....	36612	Genuine, 91 p. c. purity.
.....	"	"	"	490	.....	.....	.....	.....	.....	.....	36613	Genuine, 92 p. c. purity.
.....	"	"	"	495	.....	.....	.....	.....	.....	.....	36614	Genuine, 93 p. c. purity.
.....	Pres- ent.	Pres- ent.	Pres- ent.	225	53.22 Maize	5.20	3.80	6.38	4.30	.....	36615	Adulterated.
.....	None.	None.	None.	485	.....	.....	.....	.....	.....	.....	36616	Genuine, 91 p. c. purity.
.....	"	"	"	495	.....	.....	.....	.....	.....	.....	36617	Genuine, 93 p. c. purity.
.....	"	Pres- ent.	Pres- ent.	575	None. None.	2.77	16.40	25.75	29.90	.....	36618	Adulterated.
.....	Pres- ent.	"	"	305	47.58 Maize	0.39	11.80	5.01	14.10	.....	36619	Adulterated.
.....	None.	None.	None.	490	.....	.....	.....	.....	.....	.....	36620	Genuine, 92 p. c. purity.
.....	"	"	"	530	.....	.....	.....	.....	.....	.....	36621	Up to B. P. standard of purity.



1 GEORGE V., A. 1911  
BULLETIN No. 195—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity	Cents.	
DISTRICT OF ST. HYACINTHE—						
1909.						
Sept. 15	Cream of Tartar.	1201	N. Lindsay, Drummondville	$\frac{1}{2}$ lb.....	18	Lacaille & Gendron, Montreal.
" 15	" ..	1202	Archambault & Guertin, Actonville.	$\frac{1}{2}$ " ..	20	L. Chaput Fils & Cie., Montreal.
" 15	" ..	1203	F. X. Lamothe, Upton ....	3 pkgs.	30	E. W. Gillett Co., Limited, Toronto.
" 16	" ..	1204	A. C. Gilmore, Waterloo ....	$\frac{1}{2}$ lb.....	12	Unknown.....
" 16	" ..	1205	S. N. Fontenault, Marieville.	$\frac{1}{2}$ " ..	20	.....
" 17	" ..	1206	A. E. D'Artois & Fils, Farnham.	$\frac{1}{2}$ " ..	20	Herron, Leblanc & Cie., Montreal.
" 22	" ..	1207	C. Fortier, Lac Megantic....	$\frac{1}{2}$ " ..	20	Unknown.....
" 22	" ..	1208	M. J. Smith, Lac Megantic..	$\frac{1}{2}$ " ..	15	" .....
" 22	" ..	1209	T. McCrea & Co., Cookshire.	3 pkgs..	30	White Swan Spices & Cereals, Ltd., Toronto.
" 23	" ..	1210	T. Roberge, Sherbrooke.....	3 " ..	30	S. H. & A. S. Ewing, Montreal.
" 23	" ..	1211	Vaughan Bros., Magog..	3 " ..	30	Herron, Leblanc, Ltd., Montreal.
" 23	" ..	1212	R. E. Bertrand, Magog... ..	$\frac{1}{2}$ lb.....	15	Hudon, Hebert & Cie., Montreal.
" 24	" ..	1213	Coaticook Chemical Co'y., Coaticook.	$\frac{1}{2}$ " ..	15	Unknown.....
" 24	" ..	1214	N. Lacroix, Sherbrooke.....	$\frac{1}{2}$ " ..	20	" .....
" 27	" ..	1215	Alex. Hébert, St. Hyacinthe.	$\frac{1}{2}$ " ..	20	" .....

## DISTRICT OF MONTREAL—

Sept. 7	Cream of Tartar.	40311	W. Plante, Valleyfield, P.Q.	$\frac{1}{2}$ lb. ..	20	F. F. Dalley Co., Limited, Hamilton.
" 14	"	40312	E. Lamarche, Joliette, P.Q. ..	$\frac{1}{2}$ " ..	18	.....
" 14	"	40313	Magnan Freres, Joliette, P.Q. ..	$\frac{1}{2}$ " ..	20	J. V. Boudrais, Montreal...
" 15	"	40314	Geo. Beausoleil, Terrebonne, P.Q.	$\frac{1}{2}$ " ..	20	Hudon, Hebert & Co., Montreal.
" 16	"	40315	John Smaill, Huntingdon, P.Q.	3 pkgs. ..	30	E. W. Gillett Co., Limited, Toronto.
" 17	"	40316	J. A. Lefebvre, Lachine, P.Q.	$\frac{1}{2}$ lb. ....	30	.....
" 17	"	40317	M. Charest, Lachine, P.Q. ...	$\frac{1}{2}$ " ..	30	Laporte, Martin & Cie., Ltd., Montreal.
" 17	"	40318	A. Carignan, Lachine, P.Q. ...	$\frac{1}{2}$ " ..	30	.....



SESSIONAL PAPER No. 14  
CREAM OF TARTAR.

## RESULTS OF ANALYSIS.

Inspector's Report (Is not an expression of opinion.)	Preliminary Examination.				Determinations.						No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.	Calcium Oxide.		
J. C. ROULEAU, INSPECTOR.												
	p.c.	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.	p.c.	
Pure ground Cream of Tartar.	None.	None.	None.	505	.....	.....	.....	.....	.....	.....	1201	Genuine, 95 p. c. purity.
.....	"	"	"	475	.....	.....	.....	.....	.....	.....	1202	Genuine, 89 p. c. purity.
Guaranteed to be absolutely pure.	"	"	"	534	.....	.....	.....	.....	.....	.....	1203	Up to B. P. standard of purity.
.....	"	"	"	495	.....	.....	.....	.....	.....	.....	1204	Genuine, 93 p. c. purity.
.....	"	Pres-ent.	Pres-ent.	400	None.	None.	1.68	21.7	24.03	38.04	1205	Adulterated.
.....	Pres-ent.	"	"	490	1.20	Maize	1.00	9.80	5.63	15.40	1206	Adulterated.
.....	"	"	"	330	29.43	"	5.80	6.00	4.12	5.80	1207	Adulterated.
.....	None.	None.	None.	505	.....	.....	.....	.....	.....	.....	1208	Genuine, 95 p. c. purity.
Guaranteed strictly pure.	"	"	"	500	.....	.....	.....	.....	.....	.....	1209	Genuine, 94 p. c. purity.
Pure ground..	"	"	"	502	.....	.....	.....	.....	.....	.....	1210	Genuine, 94 p. c. purity.
Free from any adulteration.	Pres-ent.	Pres-ent.	Pres-ent.	482	3.27	Maize	None.	6.95	5.74	6.60	1211	Adulterated.
.....	"	"	"	340	45.24	"	0.93	13.25	0.41	16.20	1212	Adulterated.
.....	"	"	"	125	42.04	"	4.62	7.50	9.61	11.80	1213	Adulterated.
.....	None.	None.	None.	480	.....	.....	.....	.....	.....	.....	1214	Genuine, 90 p. c. purity.
.....	"	"	"	480	.....	.....	.....	.....	.....	.....	1215	Genuine, 90 p. c. purity.

## J. J. COSTIGAN, INSPECTOR.

.....	"	"	"	495	.....	.....	.....	.....	.....	.....	40311	Genuine, 93 p. c. purity.
.....	Pres-ent.	Pres-ent.	Pres-ent.	500	6.60	Maize	0.30	10.10	11.00	11.60	40312	Adulterated.
"Imperial" Brand;	"	"	"	510	3.80	"	0.30	8.66	8.80	11.20	40313	Adulterated.
.....	"	"	"	265	56.92	"	1.00	7.95	4.87	10.00	40314	Adulterated.
.....	None.	None.	None.	534	.....	.....	.....	.....	.....	.....	40315	Up to B. P. standard of purity.
.....	Pres-ent.	Pres-ent.	Pres-ent.	525	2.24	Maize	0.52	9.50	4.67	11.80	40316	Adulterated.
.....	None.	None.	None.	480	.....	.....	.....	.....	.....	.....	40317	Genuine, 90 p. c. purity.
.....	"	"	"	500	.....	.....	.....	.....	.....	.....	40318	Genuine, 94 p. c. purity.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF MONTREAL—

1909.

Sept. 18	Cream of Tartar	40319	E. Grenier, 528 Centre st., Montreal.	$\frac{1}{2}$ lb....	30	Laporte, Martin & Cie., Ltd., Montreal.
" 18	"	40320	A. Walgensinger, 420 Charlevoix st., Montreal.	$\frac{1}{2}$ " ..	30	S. H. Ewing & Sons, Montreal.
" 21	"	40321	J. Poupart, Longueuil, P.Q..	$\frac{1}{2}$ " ..	30	.....
" 22	"	40322	J. Demetelin, 144 St. Antoine st., Montreal.	3 pkgs..	15	Lister Pure Food Co., Ltd., Toronto.
" 23	"	40323	Duquette & Falcon, 112 Park Ave., Montreal.	$\frac{1}{2}$ lb... .	20	J. J. Duffy & Co., Montreal.
" 23	"	40324	A. Dionne, 124 Sherbrooke W., Montreal.	3 pkgs..	25	S. H. Ewing & Sons, Montreal.
" 23	"	40325	Isidore Gougeon, 368 Dorchester W., Montreal.	$\frac{1}{2}$ lb....	18	.....

DISTRICT OF OTTAWA

Sept. 22	Cream of Tartar	41283	J. C. Brown & Co., Vankleek Hill.	$\frac{1}{2}$ lb ....	15	White Swan Mills, Toronto..
" 24	"	41284	J. D. Laflamme, Winchester.	$\frac{1}{2}$ " ....	18	Birks Corner & Co., Montreal
" 24	"	41285	Hugh Fraser & Son, Winchester.	$\frac{1}{2}$ " ....	20	" " ..
" 25	"	41286	G. E. Armstrong, Perth.....	$\frac{1}{2}$ " ....	20	Unknown ....
" 27	"	41287	Joseph Cousineau, Gatineau Point.	$\frac{1}{2}$ " ....	15	" ..
" 28	"	41288	J. P. Lawrence, Spencerville	$\frac{1}{2}$ " ...	18	F. F. Dalley Co., Ltd, Hamilton.
" 28	"	41289	A. Millar, Spencerville.....	$\frac{1}{2}$ " ..	20	T. W. Chamberlain & Co., Prescott.
" 29	"	41290	G. A. Huot & Son, Alexandria.	$\frac{1}{2}$ " ..	20	F. F. Dalley Co., Ltd., Hamilton.
" 29	"	41291	John Simpson & Son, Alexandria.	$\frac{1}{2}$ " ...	18	Unknown .....
Oct. 4	"	41292	A. S. Russell, Galetta. ....	$\frac{1}{2}$ " ....	20	White Swan Mills, Toronto..
" 4	"	41293	D. B. Eastman, Kinburn ...	$\frac{1}{2}$ " ....	20	" " ..
" 5	"	41294	J. R. Fogle, Ottawa.....	" " ....	18	F. J. Castle Co., Ottawa....
" 5	"	41295	Millar & Watson, Ottawa...	$\frac{1}{2}$ " ....	20	" " ..
" 5	"	41296	Mrs. E. Dunn, Ottawa... ..	$\frac{1}{2}$ " ..	20	H. N. Bate & Sons, Ottawa
" 5	"	41297	F. A. Scott & Son, Ottawa...	$\frac{1}{2}$ " ..	20	The Lister Pure Food Co. Toronto.



SESSIONAL FAPER No. 14  
CREAM OF TARTAR.

RESULTS OF ANALYSIS.											Remarks, and Opinion of (the Chief Analyst.	
Inspector's Report. (Is not an expression of opinion.)	Preliminary Examination.				Determinations.							No. of Sample.
	Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumina.	Phosphoric. Acid.	Sulphuric Acid.	Calcium Oxide.		

J. J. COSTIGAN, INSPECTOR—*Concluded.*

	p. c.	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
.....	Pres- ent.	Pres- ent.	Pres- ent.	490	6.20	Maize	0.83	13.25	10.02	12.60	40319	Adulterate l.
.....	None.	None.	None.	500	.....	.....	.....	.....	.....	.....	40320	Genuine, 94 p. c. purity.
.....	Pres- ent.	Pres- ent.	Pres- ent.	420	31.83	Maize	1.00	11.50	5.73	14.00	40321	Adulterated.
.....	None.	None.	None.	505	.....	.....	.....	.....	.....	.....	40322	Genuine, 95 p. c. purity.
.....	"	"	"	495	.....	.....	.....	.....	.....	.....	40323	Genuine, 93 p. c. purity.
"Prince of Wales" brand	"	"	"	495	.....	.....	.....	.....	.....	.....	40324	Genuine, 93 p. c. purity.
.....	"	"	"	495	.....	.....	.....	.....	.....	.....	40325	Genuine, 93 p. c. purity.

J. A. RICKEY, INSPECTOR.

.....	None.	None.	None.	485	.....	.....	.....	.....	.....	.....	41283	Genuine, 91 p. c. purity.
Sample from a box marked pure.	"	"	"	484	.....	.....	.....	.....	.....	.....	41284	Genuine, 91 p. c. purity.
.....	"	"	"	484	.....	.....	.....	.....	.....	.....	41285	Genuine, 91 p. c. purity.
Sample from a tin marked, Pure Gold Cream of Tar- tar. Quality guaranteed.	"	"	"	510	.....	.....	.....	.....	.....	.....	41286	Genuine, 96 p. c. purity.
.....	"	Pres- ent.	Pres- ent.	418	.....	.....	0.30	34.90	21.40	33.40	41287	Adulterated.
.....	"	None.	None.	486	.....	.....	.....	.....	.....	.....	41288	Genuine, 91 p. c. purity.
.....	"	"	"	492	.....	.....	.....	.....	.....	.....	41289	Genuine, 92 p. c. purity.
.....	"	"	"	522	.....	.....	.....	.....	.....	.....	41290	Up to B. P. standard of purity.
.....	"	"	"	486	.....	.....	.....	.....	.....	.....	41291	Genuine, 91 p. c. purity.
.....	"	"	"	510	.....	.....	.....	.....	.....	.....	41292	Genuine, 96 p. c. purity.
.....	"	"	"	482	.....	.....	.....	.....	.....	.....	41293	Genuine, 91 p. c. purity.
.....	"	"	"	500	.....	.....	.....	.....	.....	.....	41294	Genuine, 94 p. c. purity.
.....	"	"	"	492	.....	.....	.....	.....	.....	.....	41295	Genuine, 92 p. c. purity.
.....	"	"	"	526	.....	.....	.....	.....	.....	.....	41296	Up to B. P. standard of purity.
.....	"	"	"	493	.....	.....	.....	.....	.....	.....	41297	Genuine, 94 p. c. purity.



Date of Collection.	Nature of Sample.	No of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.
				Quantity.	Cents.	
DISTRICT OF KINGSTON—						
1909.						
Sept. 7	Cream of Tartar	42701	H. M. Stover, Kingston . . . .	½ lb. ....	20	A. Maclean, Kingston. . . .
" 7	"	42702	C. S. Litton, Kingston. ....	½ " ....	20	H. Cochrane, Ottawa. ....
" 7	"	42703	J. Cullen, Kingston. ....	½ " ....	20	A. Maclean, Kingston. ....
" 7	"	42704	C. Saunders, Kingston. ....	½ " ....	30	E. W. Gillett Co., Ltd., Toronto.
" 7	"	42705	C. Pickering, Kingston . . . .	½ " ....	20	Unknown . . . . .
" 7	"	42706	Anderson Bros., Kingston. ....	½ " ....	30	McLaren's, Hamilton. ....
" 7	"	42707	E. S. Suddard, Kingston. ....	½ " ....	30	Greig, Toronto. ....
" 7	"	42708	Kirk & Lee, Kingston. ...	½ " ....	20	Gorman & Eckert, London, O
" 7	"	42709	Geo. Gibson, Kingston. ....	½ " ....	20	F. F. Dalley Co., Ltd., Hamilton.
" 8	"	42710	J. H. P. Young, Belleville. . .	½ " ....	20	Pure Gold, Toronto. ....
" 8	"	42711	W. T. Patterson, Belleville. .	½ " ....	20	" . . . . .
" 8	"	42712	T. R. Harvey, Cobourg. ....	½ " ....	20	Gorman & Eckert, London, O
" 8	"	42713	S. Fourt, Port Hope. ....	½ " ....	20	Red Feather. . . . .
" 8	"	42714	F. Rosewear, Port Hope. ...	½ " ....	20	Todhunter & Mitchell, Toronto.
" 8	"	42715	W. J. Roulty, Peterboro' ....	½ " ....	20	R. Greig, Toronto. ....
DISTRICT OF TORONTO—						
Sept. 11	Cream of Tartar	41347	L. Blucman, Toronto . . . . .	½ lb. . . .	20	Unknown. . . . .
" 11	"	41348	P. Haberman, Toronto. ....	½ " ....	20	J. Prager, Toronto . . . .
" 13	"	41349	H. Wright, Markham. . . .	½ " ....	20	Dalton Bros., Toronto. ....
" 14	"	41350	J. A. Richards, Uxbridge. ....	½ " ....	20	The J. M. Lowes Co., Ltd., Toronto.
" 14	"	41351	J. G. French, Beaverton. ....	½ " ....	20	The F. F. Dalley Co., Ltd., Hamilton.



SESSIONAL PAPER No. 14

## CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.										No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Preliminary Examination.				Determinations.							
	Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.	Calcium Oxide.		

H. J. DAGER, INSPECTOR.

Sold as Cream of Tartar.	Pres. ent.	Pres. ent.	None.	460	5.08	Maize	1.30	None.	5.93	6.00	41347	Adulterated.
Sample from tin labelled Pure Ground Cream of Tartar. Sold as Cream of Tartar.	"	None.	"	520	8.10	"	.....	.....	.....	.....	41348	Adulterated.
"Bison" brand	None.	"	.....	505	.....	.....	.....	.....	.....	.....	41349	Genuine, 94 p. c. purity.
.....	Pres. ent.	Pres. ent.	Pres. ent.	460	11.50	Maize	2.18	3.62	9.68	5.60	41350	Adulterated.
Sample from tin labelled Pure Cream of Tartar.	None.	None.	None.	500	.....	.....	.....	.....	.....	.....	41351	Genuine, 94 p. c. purity.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF TORONTO—

1909.						
" 15	Cream of Tartar.	41352	J. B. Johnston, Orillia .	$\frac{1}{2}$ lb . . .	20	F. W. Humphrey, Toronto..
" 16	"	41353	Geo. Baker, Midland.....	$\frac{1}{2}$ " . . .	15	E. W. Gillett Co., Ltd., To- ronto.
" 16	"	41354	J. McConkey, Penetang.....	$\frac{1}{2}$ " . . .	20	Unknown .....
" 17	"	41355	J. E. Enems, Barrie.....	$\frac{1}{2}$ " . . .	20	Jno. Sloan & Co., Toronto...
" 24	"	41356	R. Clark, Dundas. . . . .	$\frac{1}{2}$ " . . .	20	Young Winfield, Ltd., Ham- ilton.
" 24	"	41357	W. Durance, Hamilton.....	$\frac{1}{2}$ " . . .	20	Norman & Co., Hamilton.
" 24	"	41358	Wm. Macartie, Hamilton... ..	$\frac{1}{2}$ " . . .	20	Unknown .....
" 23	"	41359	Hall & Co., Hamilton... ..	$\frac{1}{2}$ " . . .	15	" .....
" 27	"	41360	Joseph Brown, Toronto.....	$\frac{1}{2}$ " . . .	20	Dalton Bros., Toronto.....
" 27	"	41361	A. Grattan, Toronto.... .	$\frac{1}{2}$ " . . .	20	The Davidson & Hay, Ltd., Toronto.

DISTRICT OF LONDON—

Sept. 14	Cream of Tartar.	30819	A. Beattie, St. Mary's .	$\frac{1}{2}$ lb . . .	20	Lyman Sons & Co., Montreal
" 14	"	30821	G. McLean, St. Mary's .....	$\frac{1}{2}$ " . . .	20	A. M. Smith & Co., London, Ont.
" 14	"	30822	McCulley & Haugh, Stratford	$\frac{3}{4}$ " . . .	30	F. F. Dalley & Co. Ltd., Hamilton.
" 15	"	30827	Barnsdale Trading Co	3 pkgs..	30	Canada Grocery Co., Lon- don, Ont.
" 15	"	30829	A. G. Lloyd, Stratford	$\frac{1}{2}$ lb . . .	30	Gorman & Eckert, London, Ont.
" 15	"	30832	M. Durkin, Mitchell..	$\frac{1}{2}$ " . . .	30	E. W. Gillett Co., Ltd., To- ronto.



SESSIONAL PAPER No. 14  
CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.										No. of Sample.	Remarks and Opinions of the Chief Analyst.
	Preliminary Examination.				Determinations.							
	Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.	Calcium Oxide.		

H. J. DAGER, TORONTO—*Concluded.*

	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.			
Sample from tin labelled Cream of Tartar.	None.	Pres-ent.	None.	455	None.	None.	None.	None.	6.40	6.60	42352	Genuine, 86 p. c. purity.
Sample from paper bag labelled absolutely pure.	"	None	"	515	.....	.....	.....	.....	.....	.....	41353	Up to B. P. standard of purity.
.....	"	"	"	505	.....	.....	.....	.....	.....	.....	41354	Genuine, 94 p. c. purity.
Sample from tin labelled Cream of Tartar.	"	"	"	490	.....	.....	.....	.....	.....	.....	41355	Genuine, 92 p. c. purity.
.....	"	"	"	486	.....	.....	.....	.....	.....	.....	41356	Genuine, 91 p. c. purity.
.....	"	"	"	488	.....	.....	.....	.....	.....	.....	41357	Genuine, 92 p. c. purity.
Sample sold as Cream of Tartar.	"	"	"	482	.....	.....	.....	.....	.....	.....	41358	Genuine, 90 p. c. purity.
Sample labelled Cream of Tartar and sold as Cream of Tartar.	"	"	"	484	.....	.....	.....	.....	.....	.....	41359	Genuine, 91 p. c. purity.
Sample from original 1 lb. tin labelled Cream of Tartar and sold as Cream of Tartar.	"	"	"	496	.....	.....	.....	.....	.....	.....	41360	Genuine, 93 p. c. purity.
'Falcon' brand. Sold as Cream of Tartar.	Pres-ent.	Pres-ent.	Trace.	482	15.50	Maize	2.20	Trace.	9.26	2.00	41361	Adulterated.

## T. KIDD, INSPECTOR.

.....	None	None	None.	490	.....	.....	.....	.....	.....	.....	30819	Genuine, 92 p. c. purity.
.....	"	"	"	534	.....	.....	.....	.....	.....	.....	30821	Up to B. P. standard of purity.
.....	"	"	"	500	.....	.....	.....	.....	.....	.....	30822	Genuine, 94 p. c. purity.
.....	"	"	"	500	.....	.....	.....	.....	.....	.....	30827	Genuine, 94 p. c. purity.
.....	"	"	"	505	.....	.....	.....	.....	.....	.....	30829	Genuine, 94 p. c. purity.
.....	"	"	"	534	.....	.....	.....	.....	.....	.....	30832	Up to B. P. standard of purity.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	
DISTRICT OF LONDON—						
1909						
Sept. 15	Cream of Tartar	30834	N. E. Coppin, Mitchell.....	$\frac{1}{2}$ lb....	20	Lumsden Bros., Hamilton...
" 15	"	30836	T. F. Mulineux, Dublin....	$\frac{3}{4}$ " ....	30	E. W. Gillett Co., Ltd., Toronto
" 16	"	30838	T. S. Blewis, Seaforth.....	3 pkgs..	25	F. F. Dalley & Co., Ltd., Hamilton.
" 16	"	30839	W. R. Smith, Seaforth.....	3 " ..	30	E. W. Gillett Co., Ltd., Toronto.
" 20	"	30841	Benson Bros., Guelph. . .	$\frac{3}{4}$ lb . .	30	Belford, Hamilton.....
" 21	"	30848	P. T. Dean, Goderich.....	$\frac{1}{2}$ " ..	20	Gorman & Eckert, London, Ont
" 21	"	30852	J. J. McEwin, Goderich.....	$\frac{3}{4}$ " ..	30	E. W. Gillett Co., Ltd., Toronto.
" 22	"	30854	J. A. Anderson & Son, Blythe	$\frac{1}{2}$ " ...	20	Gorman & Eckert, London, Ont.
" 22	"	30857	A. J. Malcolm, Wingham...	$\frac{1}{2}$ " ..	30	" " "
" 22	"	30858	J. Henry Christie, Wingham	$\frac{1}{2}$ " ..	20	Todhunter & Mitchell, Toronto.
DISTRICT OF WINDSOR—						
Oct. 4	Cream of Tartar.	42601	Bradley & Son, Chatham....	9 oz....	20	Unknown.....
" 4	"	42604	Jas. Paul, Chatham.....	$\frac{1}{2}$ lb....	18	G. M. Smith & Co., London, Ont.
" 5	"	42611	J. H. Luxford, Walkerville..	$\frac{1}{2}$ " ...	20	Unknown.....
" 5	"	42615	Clarke & Bake, Walkerville.	$\frac{1}{2}$ " ....	20	Unknown.....
" 5	"	42619	J. Foster, Walkerville. ....	$\frac{1}{2}$ " ....	20	.....
" 5	"	42621	Plante Bros., Walkerville .	3 pkgs.	15	McLaren's, Hamilton..
" 6	"	42624	J. E. Terry, Windsor.. ....	$\frac{1}{2}$ lb....	18	T. Smyth, Windsor.....
" 6	"	42625	J. W. McKinney, Windsor.	3 pkgs..	25	London Canning & Evaporating Co.
" 6	"	42626	C. L. Billing, Essex... ..	$\frac{1}{2}$ lb..	10	Unknown.
" 6	"	42627	A. H. Scarff, Essex.....	pkgs..	30	Canada Spice and Grocery Co., London, Ont.
" 6	"	42632	Chas. A. Jeffery, Kingsville..	$\frac{1}{2}$ lb....	20	Unknown.....



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## CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Preliminary Examination.					Determinations.						
	Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumnia.	Phosphoric Acid.	Sulphuric Acid.	Calcium Oxide.		
T. KIDD, INSPECTOR— <i>Concluded.</i>												
	p. c.	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
.....	None.	None.	None.	495							30834	Genuine, 93 p. c. purity.
.....	"	"	"	534							30836	Up to B. P. standard of purity.
.....	"	"	"	500							30838	Genuine, 94 p. c. purity.
.....	"	"	"	534							30839	Up to B. P. standard of purity.
.....	"	"	"	534							30841	Up to B. P. standard of purity.
.....	"	"	"	505							30848	Genuine, 94 p. c. purity.
.....	"	"	"	534							30852	Up to B. P. standard of purity.
.....	"	"	"	495							30854	Genuine, 93 p. c. purity.
.....	"	"	"	500							30857	Genuine, 94 p. c. purity.
.....	"	"	"	520							30858	Up to B. P. standard of purity.

## JNO. TALBOT, INSPECTOR.

.....	None.	None.	None.	480							42601	Genuine, 90 p. c. purity.
.....	"	"	"	504							42604	Genuine, 94 p. c. purity.
.....	"	"	"	490							42611	Genuine, 92 p. c. purity.
.....	Pres-ent.	Pres-ent.	Pres-ent.	502	13.10	Maize	2.40	1.15	10.60	2.20	42615	Adulterated.
.....	"	"	"	354	16.20	"	2.30	2.90	6.66	3.00	42619	Adulterated.
McLaren's 'Invincible.'	None.	None.	None.	490							42621	Genuine, 92 p. c. purity.
.....	"	"	"	488							42624	Genuine, 92 p. c. purity.
'Sweetheart' Brand.	"	"	"	498						1.00	42625	Genuine, 94 p. c. purity.
.....	"	"	"	486							42626	Genuine, 91 p. c. purity.
'Crest' Brand, guaranteed absolutely pure.	"	"	"	498							42627	Genuine, 94 p. c. purity.
Vendor said he would not be positive whether it was Gillett's or McLaren's.	"	"	"	490							42632	Genuine, 92 p. c. purity.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	
DISTRICT OF WINDSOR—						
1909.						
Sept. 7	Cream of Tartar	42637	Geo. McIntyre, Leamington.	3 pkgs..	30	Gorman, Eckert & Co., London, Ont.
" 7	" "	42638	J. E. Davies, Leamington...	3 "	30	E. W. Gillett Co., Ltd., Toronto.
" 8	" "	42642	J. Caron, Ridgetown...	$\frac{1}{2}$ lb....	20	Unknown
" 8	" "	42643	Orendorf Bros.....	3 pkgs..	30	Gorman, Eckert & Co., London, Ont.
DISTRICT OF MANITOBA—						
Sept. 15	Cream of Tartar	39771	A. Nitikman, Winkler.....	$\frac{1}{2}$ lb	25	Gold Standard Mfg. Co., Winnipeg.
" 15	" "	39772	Rosner & Brownstone, Plum Coulee.	$\frac{1}{2}$ " ...	20	The Gold Standard Mfg. Co., The Codville Co., Winnipeg.
" 15	" "	39773	D. C. Peters, Plum Coulee..	$\frac{1}{2}$ " .	20	E. W. Gillett Co., Ltd., Toronto.
" 16	" "	39774	H. Hilton, Cypress River....	$\frac{1}{2}$ " ....	25	" "
" 17	" "	39775	Higgins & Webster, Roland .	$\frac{1}{2}$ " .	25	White Swan Spice & Cereal Co., Ltd., Toronto.
" 21	" "	39776	Alex. Reid, Brandon ..	$\frac{1}{2}$ " ....	20	White Swan, Toronto....
" 21	" "	39777	A. M. Percival, Brandon....	$\frac{1}{2}$ " .	20	Gold Standard Mfg. Co., Winnipeg.
" 21	" "	39778	Smith & Burton, Brandon...	$\frac{1}{2}$ " ...	20	Vendors .....
" 22	" "	39779	D. Rice, Brandon.....	$\frac{1}{2}$ " .	20	The Codville Co., Brandon.
" 22	" "	39780	Murray & Beattie, Rapid City.	$\frac{1}{2}$ " ...	20	Unknown
" 22	" "	39781	Lepage Bros., Rapid City....	$\frac{1}{2}$ " ...	20	The Blue Ribbon, Ltd., Winnipeg.
" 23	" "	39782	D. G. McDonald, Portage le Prairie.	$\frac{1}{2}$ " .	25	The Jobin Marrin Co., Winnipeg.
" 23	" "	39783	Burley's, Portage le Prairie..	$\frac{1}{2}$ " .	20	Gold Standard Mfg. Co., Winnipeg.
" 23	" "	39784	T. A. Newman & Bro., Portage le Prairie.	$\frac{1}{2}$ " .	20	Todhunter & Mitchell, Winnipeg.
" 24	" "	39785	J. Paterson, Winnipeg.	$\frac{1}{2}$ " .	20	Unknown .....



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## CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.	RESULTS OF ANALYSIS.										No. of Sample.	Remarks, and Opinion of the Chief Analyst.
	Preliminary Examination.				Determinations.							
	Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.	Calcium Oxide		
JNO. TALBOT, INSPECTOR— <i>Concluded.</i>	p. g.	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
Labelled Gorman's Pure Ground Cr. of Tartar.	None.	None.	None.	458	.....	.....	.....	.....	.....	2.80	42637	Genuine, 86 p. c. purity.
Labelled Gillett's Ground Cream of Tartar, guaranteed to be absolutely pure.	"	"	"	524	.....	.....	.....	.....	.....	.....	42638	Up to B. P. standard of purity.
.....	Pres ent.	Pres ent.	Pres ent.	430	5.92	Maize	2.10	4.35	6.15	4.20	42642	Adulterated.
Gorman's Pure Ground Cr. of Tartar, guaranteed.	None.	None.	None.	500	....	.....	.....	.....	.....	.....	42643	Genuine, 94 p. c. purity.

## A. C. LARIVIERE, INSPECTOR.

'Gold Standard.'	None.	None.	None.	525							39771	Up to B. P. standard of purity.
.....	"	"	"	520							39772	Up to B. P. standard of purity.
.....	"	"	"	534							39773	Up to B. P. standard of purity.
.....	"	"	"	534							39774	Up to B. P. standard of purity.
'White Swan'	"	"	"	505							39775	Genuine, 94 p. c. purity.
.....	"	"	"	510							39776	Genuine, 96 p. c. purity.
Gold Standard	"	"	"	485							39777	Genuine, 91 p. c. purity.
.....	"	"	"	505							39778	Genuine, 94 p. c. purity.
.....	"	"	"	534							39779	Up to B. P. standard of purity.
.....	"	"	"								39780	Is pulverized sugar
.....	"	"	"	490							39781	Genuine, 92 p. c. purity.
.....	"	"	"	534							39782	Up to B. P. standard of purity.
.....	"	"	"	505							39783	Genuine, 94 p. c. purity.
.....	"	"	"	520							39784	Up to B. P. standard of purity.
.....	"	"	"	490							39785	Genuine, 92 p. c. purity.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	
DISTRICT OF CALGARY						
1909.						
Sept. 10	Cream of Tartar.	35483	Hudson Bay Co., Lethbridge.	3 pkgs..	30	Hudson Bay Co., Winnipeg..
" 10	" "	35484	The Bentley Co., Lethbridge.	3 " ..	30	E. W. Gillett Co., Ltd., Toronto.
" 10	" "	35485	Bradbur & Co., Lethbridge..	½ lb....	25	Gold Standard Co., Ltd., Winnipeg.
" 11	" "	35486	Spencer & Todd, Medicine Hat.	3 pkgs..	30	Balfour & Co., Hamilton ....
" 11	" "	35487	H. W. Ireland & Co., Medicine Hat.	3 " ..	30	McLaren's, Ltd., Hamilton.
" 11	" "	35489	R. Dunn, Medicine Hat.....	3 " ..	30	Dyson Co., Winnipeg.....
Oct. 7	" "	35490	Acme Co., Edmonton. . . . .	3 " ..	45	Pure Gold Mfg. Co., Toronto
" 7	" "	35491	Gariepy & Lessard, Edmonton.	½ lb....	30	Unknown.....
" 7	" "	35492	Hallier & Aldridge, Edmonton.	½ " ..	20	Blue Ribbon, Ltd., Winnipeg
" 7	" "	35493	J. H. Morris & Co., Edmonton.	3 pkgs..	30	E. W. Gillett Co., Ltd., Toronto.
" 7	" "	35494	Capital Mer. Co., Edmonton.	3 " ..	30	" "
" 7	" "	35495	J. H. Stoddart, Edmonton..	½ lb....	20	" "
" 7	" "	35496	C. Hall, Edmonton.....	3 pkgs..	30	" "
" 7	" "	35497	City Grocery Co., Edmonton.	3 " ..	30	" "
" 7	" "	35498	Hudson Bay Co., Edmonton.	3 " ..	30	White Star Mfg. Co., Winnipeg.

DISTRICT OF VANCOUVER—

Sept. 10	Cream of Tartar.	37718	W. Clark, Vancouver.. . . .	½ lb....	25	Pure Gold Mfg. Co., Toronto
" 10	" "	37719	Woodward Dept. Stores, Vancouver.	½ " ....	25	E. W. Gillett Co., Ltd., Toronto.
" 10	" "	37720	Geo. Wagg, Vancouver.....	2 pkgs..	25	Wm. Braid & Co., Vancouver
" 10	" "	37721	J. R. Gosling, Vancouver....	½ lb....	25	E. W. Gillett Co., Ltd., Toronto.
" 10	" "	37722	J. A. Hawkes, Vancouver..	2 pkgs..	25	Mayell & Co., Toronto .....



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## CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.										No. of Samples.	Remarks and Opinion of the Chief Analyst.
	Preliminary Examination.				Determinations.							
	Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.	Calcium Oxide.		

## R. W. FLETCHER, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.		
.....	None	None	None	485		.....	.....	.....	.....	.....	35483	Genuine, 91 p. c. purity.
.....	"	"	"	534		.....	.....	.....	.....	.....	35484	Up to B. P. standard of purity.
.....	"	"	"	534		.....	.....	.....	.....	.....	35485	Up to B. P. standard of purity.
.....	"	"	"	495		.....	.....	.....	.....	.....	35486	Genuine, 93 p. c. purity.
.....	"	"	"	455		.....	.....	.....	.....	.....	35487	Genuine, 86 p. c. purity.
.....	"	"	"	490		.....	.....	.....	.....	.....	35489	Genuine, 92 p. c. purity.
.....	"	"	"	502		.....	.....	.....	.....	.....	35490	Genuine, 94 p. c. purity.
.....	"	"	"	474		.....	.....	.....	.....	2.20	35491	Genuine, 89 p. c. purity.
.....	"	"	"	474		.....	.....	.....	.....	2.20	35492	Genuine, 89 p. c. purity.
.....	"	"	"	526		.....	.....	.....	.....	.....	35493	Up to B. P. standard of purity.
.....	"	"	"	526		.....	.....	.....	.....	.....	35494	Up to B. P. standard of purity.
.....	"	"	"	526		.....	.....	.....	.....	.....	35495	Up to B. P. standard of purity.
.....	"	"	"	526		.....	.....	.....	.....	.....	35496	Up to B. P. standard of purity.
.....	"	"	"	526		.....	.....	.....	.....	.....	35497	Up to B. P. standard of purity.
.....	"	"	"	470		.....	.....	.....	.....	2.00	35498	Genuine, 88 p. c. purity.

## J. F. POWER, INSPECTOR.

Quality guar- anteed.	None.	None.	None.	490	.....	.....	.....	.....	.....	.....	37718	Genuine, 92 p. c. purity.
Guaranteed ab- solutely pure	"	"	"	524	.....	.....	.....	.....	.....	.....	37719	Up to B. P. standard of purity.
Guaranteed pure.	"	"	"	474	.....	.....	.....	.....	.....	2.20	37720	Genuine, 89 p. c. purity.
Pure .....	"	"	"	524	.....	.....	.....	.....	.....	.....	37721	Up to B. P. standard of purity.
"Art" brand absolutely pure	"	"	"	482	.....	.....	.....	.....	.....	.....	37722	Genuine, 91 p. c. purity.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	
DISTRICT OF VANCOUVER—						
1909.						
Sept. 11	Cream of Tartar	37723	Duke's Grocery, Vancouver..	$\frac{1}{2}$ lb....	25	Empress Mfg. Co., Vancouver
" 13	" "	37724	Kelly, Douglas & Co., Van- couver.	$\frac{1}{2}$ " ....	30	Vendors.....
" 13	" "	37725	W. J. McMillan & Co., Van- couver.	$\frac{1}{2}$ " ....	25	Unknown.....
" 16	" "	37746	Walford & Rooney, Vancou- ver.	1 " ....	30	" .....
" 16	" "	37747	Kyles Grocery, Vancouver...	3 pkgs..	30	W. H. Wilson, Vancouver...
" 16	" "	37748	Mrs. Scott, Vancouver ..	$\frac{1}{2}$ lb. ..	20	Braid & Co., Vancouver. ..
" 16	" "	37749	Webster Bros., Vancouver...	$\frac{1}{2}$ " ....	30	Lockerby Bros., Montreal...
" 16	" "	37750	London Grocery, Vancouver.	$\frac{1}{2}$ " ...	30	Unknown.....
" 20	" "	37751	H. Albert, Vancouver.....	$\frac{1}{2}$ " ....	25	" .....
" 20	" "	37752	H. D. Thompson, Vancouver.	$\frac{1}{2}$ " ...	25	Braid & Co., Vancouver...
DISTRICT OF VICTORIA—						
Oct. 14	Cream of Tartar.	41534	Windsor Grocery Co., Vic- toria, B.C.	$\frac{1}{2}$ lb...	25	Pioneer Coffee & Spice Mills Ltd., Victoria, B.C.
" 15	" "	41535	The West End Grocery Co., Ltd., Victoria, B.C.	$\frac{1}{2}$ " ....	25	E. W. Gillett Co., Ltd., T ronto.
" 15	" "	41536	Copas & Young, Victoria, B.C.	$\frac{1}{2}$ " ...	20	" .....
" 15	" "	41537	J. W. Speed, Victoria, B.C..	$\frac{1}{2}$ " ....	25	Simon Leiser & Co., Victoria B.C.
" 15	" "	41538	Saunders Grocery Co., Ltd., Victoria, B.C.	3 pkgs..	30	E. W. Gillett Co., Ltd., To ronto.
" 15	" "	41539	Wm. B. Hall, Victoria, B.C.	$\frac{1}{2}$ lb....	20	Victoria Coffee & Spice Mills Victoria, B.C.
" 15	" "	41540	Dixie H. Ross & Co., Vic- toria, B.C.	$\frac{1}{2}$ " ....	25	E. W. Gillett Co., Ltd., To ronto.
" 16	" "	41541	A. Pool, Victoria, B.C.....	$\frac{1}{2}$ " ....	20	Empress Mfg. Co., Vancou ver, B.C.
" 16	" "	41542	Harrison & McDonald, Vic- toria, B.C.	3 pkgs..	30	A. Shilling & Co., San Fran cisco, Cal.



SESSIONAL PAPER No. 14

## CREAM OF TARTAR.

Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.										Remarks and Opinions of the Chief Analyst.
	Preliminary Examination.				Determinations.						
	Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.	Calcium Oxide.	
J. F. POWER, INSPECTOR—Concluded.											
	p. c.	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.	
.....	Pres't	None.	None.	482	3.69	Maize					37723 Adulteration apparently accidental.
Guaranteed absolutely pure	None.	"	"	524							37724 Up to B. P. standard of purity.
.....	"	"	"	478					1.80		37725 Genuine, 89 p. c. purity.
.....	"	"	"	524							37746 Up to B. F. standard of purity.
.....	"	"	"	490							37747 Genuine, 92 p. c. purity.
Guaranteed absolutely pure	"	"	"	500						1.00	37748 Genuine, 94 p. c. purity.
Pure .....	"	"	"	484							37749 Genuine, 91 p. c. purity.
"Hygienic" brand. Guaranteed absolutely pure.	"	"	"	474						2.20	37750 Genuine, 89 p. c. purity.
.....	"	"	"	486							37751 Genuine, 91 p. c. purity.
.....	"	"	"	500						0.80	37752 Genuine, 94 p. purity.
D. O'SULLIVAN, INSPECTOR.											
"Hygienic" brand. Guaranteed absolutely pure.	None.	None	None	464							41534 Genuine, 88 p. c. purity.
Guaranteed absolutely pure	"	"	"	524							41535 Up to B. P. standard of purity.
.....	"	"	"	526							41536 Up to B. P. standard of purity.
.....	"	"	"	524							41537 Up to B. P. standard of purity.
.....	"	"	"	526							41538 Up to B. P. standard of purity.
.....	"	"	"	476						1.80	41539 Genuine, 89 p. c. purity.
.....	"	"	"	522							41540 Up to B. P. standard of purity.
Labelled pure cream of tartar.	"	"	"	494							41541 Genuine, 93 p. c. purity.
"Shilling's Best" cream of tartar.	"	"	"	522							41542 Up to B. P. standard of purity.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	
DISTRICT OF VICTORIA—						
1909.						
Sept. 16	Cream of Tartar	41543	Acton Bros., Victoria B.C...	$\frac{1}{2}$ lb....	20	E. W. Gillett Co., Ltd., Toronto.
" 16	" "	41544	W. A. Jameson, Victoria, B.C.	$\frac{1}{2}$ " ....	15	R. Pichot & Co., Seattle, Wash,
" 18	" "	41545	L. Dickinson, Victoria, B.C.	3 pkgs..	30	E. R. Durkee & Co., New York, U.S.A.
" 18	" "	41546	J. Renouf, Victoria, B.C....	$\frac{1}{2}$ lb....	25	E. W. Gillett Co., Ltd., Toronto.
" 18	" "	41547	F.E.Plummer, Victoria, B.C.	$\frac{1}{2}$ " ....	20	Simon Leiser & Co., Victoria, B.C.
" 18	" "	41548	Erskine & Co., Victoria, B.C.	$\frac{1}{2}$ " ....	20	J. H. Todd & Son, Victoria, B.C.



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CREAM OF TARTAR.

RESULTS OF ANALYSIS.											
Inspector's Report. (Is not an expression of opinion.)	Preliminary Examination.					Determinations.					Remarks, and Opinion of the Chief Analyst.
	Starch.	Sulphates.	Phosphates.	Acidity.	Starch.	Kind.	Alumina.	Phosphoric Acid.	Sulphuric Acid.	Calcium Oxide.	

D. O'SULLIVAN, INSPECTOR—*Concluded.*

	p. c.	p. c.	p. c.	p. c.	p. c.		p. c.	p. c.	p. c.	p. c.	
Labelled pure cream of tar- tar.	None.	None	None.	524	..	.....	...	.....	...	...	41543 Up to B. P. standard of purity.
.....	"	"	"	520	..	.....	.....	.....	.....	.....	41544 Up to B. P. standard of purity.
"Gauntlet" brand.	"	"	"	524		.....	.....	.....	.....	.....	41545 Up to B. P. standard of purity.
Guaranteed pure.	"	"	"	522	.....	.....	.....	.....	.....	.....	41546 Up to B. P. standard of purity.
.....	"	"	"	520	.....	.....	.....	.....	.....	.....	41547 Up to B. P. standard of purity.
.....	"	"	"	520	.....	.....	.....	.....	.....	.....	41548 Up to B. P. standard of purity.







## APPENDIX Q.

## BULLETIN No. 196—ALE AND LAGER BEER.

OTTAWA, January 5, 1910.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you herewith the results of analysis of 140 samples sold as Ale (Beer) and Lager Beer, throughout Canada, in July and August of 1909. These may be classified as follows:—

Ale.....	73 samples.
Lager Beer.....	67     "
	—
	140

Of the samples sold as Ale or Beer, two samples, viz.: Nos. 39503 and 36774 contain such small amounts of alcohol, as to exclude them from recognition as Ale; they properly belong to the class of non-alcoholic beverages. Two other samples, viz.: 39504 and 39505, sold as Root-beer and Ginger Beer, respectively, yet contain alcohol equivalent to more than four per cent of proof spirit, and on this account should be regarded as alcoholic beverages, although they are not Malt Liquors.

Our last systematic examination of Malt Liquors was made in 1897, and is reported in Bulletin No. 52. The specific gravity of original worts has been determined by the method authorized for Excise purposes (C. 249), and direct comparison may therefore be instituted between the present report, and that printed as Bulletin 52.

We have no legalized definitions for the articles known as Ale (Beer) and Lager Beer. The report now furnished, together with that of 1897, contains data which will be useful in formulating standards for Malt Liquors; and I would respectfully recommend its publication as Bulletin No. 196.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
Chief Analyst.



Date of Collection.	Name of Sample	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity	Cents.		

DISTRICT OF NOVA SCOTIA—

1909.							
Aug. 16	Beer or Ale.	41726	A. Keith & Son, Halifax, N.S.	3 qts.	...	Vendors .....	Pale Ale.....
" 16	"	41727	Halifax Breweries, Ltd., Halifax, N.S.	3 "	...	Vendors.....	Howard's Ale.....
" 16	"	41728	Oland & Son, Halifax, N.S.	3 "	...	Vendors.....	Pale Ale.....
" 16	"	41729	Crystal Spring Mineral Waters Co., Halifax N.S.	3 "	...	Vendors .....	Ramey's Pilsener Beer.
" 16	"	41730	Kelley & Glassey, Halifax, N.S.	3 "	75	McEwan & Co., Edinburgh, Scotland.	India Pale Ale....

DISTRICT OF PRINCE EDWARD ISLAND—

July 19	Beer or Ale.	38541	J. & F. Morris, Charlottetown.	3 qts.	60	John Labatt, London, Ont.	.....
" 19	"	38442	Halifax Brewing Co., Charlottetown.	3 "	75	Halifax Brewing Co., Halifax, N.S.	.....
" 19	"	38543	McDonald & McKinnon, Charlottetown	3 "	75	John Labatt, London, Ont.	.....
" 19	"	38544	A. W. Reddin, Charlottetown.	3 "	75	James Ready, Fairville, N.S.	.....
" 19	"	38545	Byrne Bros., Charlottetown.	3 "	90	Bass & Co., London, Eng.	.....

DISTRICT OF NEW BRUNSWICK—

July 19	Beer or Ale.	39501	Simeon Jones, Ltd., St. Johns, N.B.	3 qts.	50	Vendors.....	"Red Ball" India Pale Ale.
" 21	"	39502	James Ready, Ltd., St. Johns, N.B.	3 "	50	Vendors.....	Ready's Pale Ale....
" 19	Ginger Beer	39503	Dolan Bros, St. Johns, N.B.	3 bots.	60	Vendors.....	Labelled Stone Ginger Beer.
" 20	Root Beer.	39504	W. B. Daley, St. Johns, N.B.	3 "	15	Vendors.....	Labelled Root Beer..
Aug. 6	Ginger Beer	39505	S. H. McKee & Sons, Fredericton, N.B.	3 "	30	Vendors.....	Labelled Stone Ginger Beer.

DISTRICT OF QUEBEC—

July 15	Beer or Ale.	36772	E. A. Delisle, 29 Cote St. Geniève.	3 bots.	35	G. E. Amiot, Quebec	.....
" 15	"	36773	V. Lacasse, Rue St. Clair.	3 "	35	Proteau & Carignan, Quebec.	.....
" 15	"	36774	Jule Rochette, 7 Rue Deligny.	3 "	35	T. B. Reneaud & Co., Quebec.	.....
" 15	"	36775	Jule Rochette, 7 Rue Deligny.	3 "	35	Boswell, Quebec.....	.....
" 15	"	36776	Jule Rochette, 7 Rue Deligny.	3 "	35	G. E. Amiot, Quebec	.....



SESSIONAL PAPER No. 14

ALE (BEER).

## RESULTS OF ANALYSIS.

Sp. Gr. at 15.5	Sp. Gr. of Distillate at 15.5.	Sp. Gr. of Dealcologized residue.	Alcohol.			Sp. Gr. of Original Worts.	Malt used, lbs. per Gallon.	Total Solids in Beer (determined).	Residual Solids (from tables).	Solids in Original Worts.	Degree of Fermentation.	Preservatives.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
			By Weight.	By Volume.	As proof spirit.									

R. J. WAUGH, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.				
1.0065	0.9908	1.0153	5.37	6.71	11.76	1.0555	2.50	3.76	3.81	13.90	72.6	...	41726	
1.0067	0.9817	1.0161	6.07	7.57	13.27	1.0617	2.78	3.83	4.01	15.47	74.1	...	41727	
1.0088	0.9914	1.0164	5.00	6.24	10.94	1.0534	2.40	3.94	4.09	13.37	69.4	...	41728	
1.0014	0.9951	1.0058	2.78	3.49	6.10	1.0249	1.12	1.34	1.44	6.21	76.8	...	41729	
1.0047	0.9896	1.0146	6.10	7.61	13.34	1.0604	2.72	3.59	3.65	15.15	75.9	...	41730	

THEO. MOORE, INSPECTOR.

1.0141	0.9952	1.0184	2.72	3.42	5.98	1.0370	1.67	4.43	4.59	9.25	50.3	.....	38541	
1.0141	0.9904	1.0134	5.62	7.01	12.30	1.0556	2.50	3.28	3.34	13.93	76.0	.....	38542	
1.0103	0.9926	1.0187	4.25	5.32	9.31	1.0494	2.22	4.24	4.58	12.36	62.9	.....	38543	
1.0071	0.9899	1.0168	6.00	7.48	13.11	1.0615	2.77	4.12	4.19	15.42	72.1	...	38544	
1.0037	0.9895	1.0192	6.21	7.74	13.57	1.0657	2.96	4.51	4.79	16.48	70.9	....	38545	

J. C. FERGUSON, INSPECTOR.

1.0070	0.9917	1.0152	4.81	6.02	10.54	1.0596	2.28	3.58	3.79	12.67	62.1	Salicylic acid.	39501	
1.0051	0.9899	1.0151	5.94	7.40	12.97	1.0598	2.69	3.47	3.76	14.99	74.9	Sulphites	39502	
1.0287	0.9980	1.0307	1.06	1.34	2.34	...	...	7.20	...	...	...	...	39503	Is not Beer.
0.9977	0.9962	1.0017	2.17	2.72	4.76	...	...	...	...	...	...	...	39504	
1.0107	0.9959	1.0151	2.33	2.93	5.13	...	...	2.99	...	...	...	...	39505	

E. BELAND, INSPECTOR.

1.0094	0.9927	1.0169	4.19	5.24	9.18	1.0471	2.20	4.02	4.21	11.79	64.3	...	36772	
1.0122	0.9926	1.0196	4.25	5.32	9.31	1.0503	2.26	4.50	4.89	12.59	61.1	Salicylic acid.	36773	
1.0003	0.9976	1.0024	1.31	1.65	2.89	1.0106	0.48	0.48	0.60	2.64	2.2	...	36774	Is not Beer
1.0048	0.9911	1.0136	5.19	6.48	11.35	1.0522	2.35	3.15	3.39	13.07	74.0	.....	36775	
1.0098	0.9927	1.0171	4.19	5.24	9.18	1.0473	2.13	4.08	4.26	11.84	64.0	....	36776	



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report (Is not expression of opinion.)
				Quantity.	Cents.		
DISTRICT OF ST. HYACINTHE—							
1909							
July 20	Beer or Ale.	947	N. Lord, St. Jean..	3 bots.	45	Labatt, London, Ont	
" 21	"	948	J. Rivet, Sorel.....	3 "	40	J. H. R. Molson & Bros., Montreal.	
" 22	"	949	J. L. H. Houde, Nicoliet.	3 "	30	Rock Springs Brewery, Quebec.	
Aug. 2	"	950	J. Beauregard & freres, Windsor Mills	3 "	45	Silver Springs Brewery, Sherbrooke.	
" 3	"	951	Silver Springs Brewery, Ltd., Sherbrooke.	3 "	....	Vendors	
DISTRICT OF MONTREAL—							
July 15	Beer or Ale.	40245	Reinhardt & Sons, Montreal.	3 bots.	30	Vendors.....	XXX Pale Ale.....
" 15	"	40246	The Nat. Brewries, Ltd., Montreal.	3 "	20	"	Ecker's Indian Pale Ale.
" 16	"	40248	Dawes & Co., La-chine, P.Q.	3 "	25	"	Black Horse, India Pale Ale.
" 17	"	40249	R. Martel, 51 Vitre st., Montreal.	3 "	31	Jno. H. R. Molson & Bros.	India Pale Ale. ....
" 17	"	40252	"	3 "	31	Beauport Brewing Co	"
DISTRICT OF OTTAWA—							
Aug. 23	Beer or Ale.	41244	The Carling B. & M. Co., Ltd., Ottawa	3 qts..	38	Vendors	Pale Bitter Ale ....
" 23	"	41245	Dawes & Co., Ltd., Ottawa.	2 "	36	"	Dawes India Pale Ale
" 23	"	41246	Capital Brewing Co., Ltd., Ottawa.	3 "	40	"	Capital Ale.....
" 23	"	41247	L. Davis, Ottawa...	3 "	40	O'Keefe's, Ltd., Toronto.	O'Keefe's "Amber" Ale.
" 23	"	41248	John Labatt, Ottawa	3 "	38	Vendor.	India Pale Ale .....
" 23	"	41281	"	.... 3 "	40	"	"Extra Stock".....
DISTRICT OF KINGSTON—							
Aug. 5	Beer or Ale.	41160	John Fisher, Portsmouth.	3 bots.	45	Vendor.....	
" 5	"	41161	R. J. Lawler, Kingston.	3 "	45	J. McCarthy & Son, Prescott.	
" 5	"	41162	J. McParland, Kingston.	3 "	45	Labatt's, London..	
" 6	"	41163	James Roy, Belleville.	3 "	40	Vendor.....	
" 6	"	41164	Port Hope B. & M. Co	3 "	45	Vendors.....	



SESSIONAL PAPER No. 14

ALE (BEER).

## RESULTS OF ANALYSIS

Sp. Gr. at 15.5°.	Sp. Gr. of Distillate at 15.5°.	Sp. Gr. of Dealcologized residue.	Alcohol.			Sp. Gr. of Original Wort.	Malt used, lbs. per Gallon.	Total Solids in Beer (determined).	Residual Solids (from tables).	Solids in Original Wort.	Degree of Fermentation.	Preservatives.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
			By Weight.	By Volume.	As proof spirit.									

J. C. ROULEAU, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.				
1.0082	0.9920	1.0163	4.62	5.78	10.13	1.0500	2.25	3.81	4.06	12.52	67.5	.....	947	
1.0043	0.9914	1.0127	5.00	6.24	10.94	1.0497	2.24	3.08	3.16	12.44	74.5	.....	948	
1.0096	0.9928	1.0166	4.12	5.16	9.04	1.0463	2.08	3.94	4.14	11.58	64.2	.....	949	
1.0074	0.9930	1.0146	4.00	5.00	8.77	1.0434	1.95	3.49	3.64	10.85	66.4	.....	950	
1.0070	0.9927	1.0163	4.19	5.24	9.18	1.0465	2.09	3.41	4.06	11.63	65.1	.....	951	

J. J. COSTIGAN, INSPECTOR.

1.0036	0.9935	1.0101	3.71	4.63	8.13	1.0365	1.64	2.20	2.52	9.12	72.3	.....	40245	
1.0094	0.9922	1.0173	4.50	5.63	9.86	1.0500	2.25	4.00	4.31	12.52	65.5	.....	40246	
1.0054	0.9914	1.0138	5.00	6.24	10.94	1.0508	2.29	3.07	3.44	12.72	72.1	Trace of salicylic acid.	40248	
1.0061	0.9914	1.0144	5.00	6.24	10.94	1.0514	2.31	3.56	3.59	12.87	72.1	"	40249	
1.0091	0.9927	1.0167	4.19	5.24	9.18	1.0460	2.11	3.72	4.16	11.74	64.5	.....	40252	

J. A. RICKEY, INSPECTOR.

1.0097	0.9913	1.0183	5.06	6.32	11.08	1.0558	2.51	4.31	4.56	13.98	67.4	.....	41244	
1.0073	0.9909	1.0153	5.31	6.63	11.62	1.0550	2.48	3.51	3.81	13.78	72.3	.....	41245	
1.0061	0.9917	1.0140	4.81	6.02	10.54	1.0494	2.22	3.49	3.37	12.36	71.8	.....	41246	
1.0101	0.9927	1.0174	4.19	5.24	9.18	1.0476	2.14	4.11	4.34	11.91	63.6	.....	41247	
1.0097	0.9916	1.0175	4.87	6.10	10.67	1.0534	2.40	4.22	4.36	13.37	67.4	.....	41248	
1.0097	0.9913	1.0181	5.06	6.32	11.08	1.0556	2.50	4.28	4.51	13.93	67.6	.....	41281	

JAS. HOGAN, INSPECTOR.

1.0066	0.9904	1.0157	5.62	7.01	12.30	1.0579	2.61	3.72	3.91	14.51	73.0	.....	41160	
1.0079	0.9904	1.0171	5.62	7.01	12.30	1.0593	2.67	4.20	4.26	14.86	71.3	.....	41161	
1.0080	0.9917	1.0163	4.81	6.02	10.54	1.0517	2.33	3.77	4.06	12.94	68.6	.....	41162	
1.0061	0.9917	1.0141	4.81	6.02	10.54	1.0495	2.23	3.18	3.51	12.39	71.7	.....	41163	
1.0081	0.9909	1.0165	5.31	6.63	11.62	1.0562	2.52	4.02	4.11	14.08	70.8	.....	41164	



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

DISTRICT OF TORONTO—

1909.							
Aug. 3	Beer or Ale.	41329	Taylor & Bates, St. Catherine's.	3 qts.	50	Vendors . . . . .	India Pale Ale.....
" 11	"	41330	Grant's Springs Brewery Co., Ltd., Hamilton.	3 "	40	" . . . . .	East India Pale Ale..
" 18	"	41331	Clooney Estate, 928 Bloor Street West, Toronto.	3 "	45	The Dom. Breweries Co., Ltd., Toronto.	India Pale Ale.....
" 18	"	41332	J. H. King, 112-116 Dundas St., Toronto.	3 "	45	Toronto B. & M. Co., Ltd., Toronto.	Pale Ale.....
" 18	"	41333	J. L. Starkey, 837 Queen Street West, Toronto.	3 "	45	The Cosgrove Brewing Co., Ltd., Toronto.	" . . . . .

DISTRICT OF LONDON—

July 22	Beer or Ale.	30686	C. J. Watson, Guelph	3 bots.	75	Halliday Bros., Guelph.	East Kent Ale.....
" 23	"	30692	Walsh Bros., Stratford.	3 "	45	John Labatt, London, Ont.	" . . . . .
" 26	"	30802	Walter Sauls, Goderich.	3 "	40	Berlin Brewing Co., Berlin, Ont.	Pilsener Beer..
" 29	"	30813	Chas. B. Pugh, Clinton.	3 "	30	Cosgrove Brewing Co., Toronto.	" . . . . .

DISTRICT OF WINDSOR—

July 23	Beer or Ale.	35980	J. H. Price, St. Thomas.	3 qts.	50	Rudolph & Begg, St. Thomas	" . . . . .
" 23	"	35981	J. H. Price, St. Thomas.	3 "	50	Cosgrove Brewing Co., Toronto.	" . . . . .
" 23	"	35982	A. E. Ponsford, St. Thomas.	3 "	50	John Labatt, London.	" . . . . .
" 23	"	35983	A. E. Ponsford, St. Thomas.	3 "	50	Carling B. & M. Co., London.	" . . . . .
" 23	"	35984	E. J. Butler, St. Thomas.	3 "	50	Walkerville Brewing Co., Walkerville..	" . . . . .

DISTRICT OF MANITOBA

July 23	Beer or Ale.	39741	P. Shea, Winnipeg..	3 "	50	McDonagh & Shea, Winnipeg, Man.	India Pale Ale...
" 26	"	39742	Geo. Vetic "	3 "	75	Bass & Co. (Bottled by C. C. Hibbert & Co., London, Eng.)	Pale Ale.....
" 26	"	39743	Green & Co. "	3 "	75	The Empire Brewing Co., Ltd. Brandon	Empire Ale....



SESSIONAL PAPER No. 14

## ALE (BEER).

RESULTS OF ANALYSIS.														
Sp. Gr. at 15°.	Sp. Gr. of Distillate at 15°.	Sp. Gr. of Dealcoholized residue.	Alcohol.			Sp. Gr. of Original Worts.	Malt used, lbs. per Gallon.	Total Solids in Beer (determined).	Residual Solids (from tables).	Solids in Original Worts.	Degree of Fermentation.	Preservatives.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
			By Weight.	By Volume.	As proof spirit.									

## H. J. DAGER, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.				
1·0087	0·9918	1·0168	4·75	5·94	10·40	1·0516	2·32	3·74	4·19	12·92	67·5	.....	41329	
1·0143	0·9916	1·0224	4·87	6·10	10·67	1·0583	2·62	5·39	5·59	14·61	61·7	.....	41330	
1·0073	0·9902	1·0169	5·75	7·17	12·57	1·0601	2·70	4·02	4·21	15·06	72·0	.....	41331	
1·0082	0·9912	1·0165	5·12	6·40	11·21	1·0545	2·73	4·08	4·11	13·65	69·9	.....	41332	
1·0073	0·9908	1·0163	5·37	6·71	11·76	1·0565	2·54	3·78	4·06	14·15	71·3	.....	41333	

## T. KIDD, INSPECTOR.

1·0033	0·9912	1·0121	5·12	6·40	11·21	1·0501	2·25	2·88	3·01	12·54	75·9	.....	30686	
1·0079	0·9920	1·0164	4·62	5·78	10·13	1·0501	2·25	3·75	4·09	12·54	67·4	.....	30692	
1·0145	0·9941	1·0205	3·35	4·20	7·36	1·0441	1·98	4·84	5·11	11·03	53·6	.....	30802	
1·0063	0·9908	1·0171	5·37	6·71	11·76	1·0573	2·58	3·92	4·26	14·36	73·1	.....	30813	

## JNO. TALBOT, INSPECTOR.

1·0171	0·9926	1·0245	4·25	5·32	9·31	1·0552	2·48	5·84	6·11	13·83	55·8	..	35980	
1·0055	0·9905	1·0148	5·56	6·94	12·16	1·0565	2·54	3·58	3·69	14·15	73·9	Sulphites	35981	
1·0109	0·9925	1·0181	4·31	5·39	9·45	1·0493	2·22	4·16	4·51	12·34	63·4	"	35982	
1·0072	0·9913	1·0157	5·06	6·32	11·08	1·0532	2·39	3·58	3·91	13·32	70·6	"	35983	
1·0067	0·9915	1·0150	4·94	6·17	10·81	1·0515	2·32	3·40	3·74	12·89	71·0	"	35984	

## A. C. LARIVIÈRE, INSPECTOR.

1·0086	0·9921	1·0165	4·56	5·71	9·99	1·0497	2·23	3·75	4·11	12·44	66·9	.....	39741	
1·0084	0·9895	1·0186	6·21	7·74	13·57	1·0651	2·93	4·28	4·64	16·33	71·6	..	39742	
1·0128	0·9924	1·0199	4·37	5·47	9·58	1·0516	2·32	4·83	4·96	12·92	61·6	...	39743	



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report (is not an expression of opinion).
				Quantity.	Cents.		

DISTRICT OF CALGARY—

1909.							
July 29.	Beer or Ale.	35573	Calgary B. & M. Co. 3 qts.	50	Vendors . . . . .		
			Calgary.				
Aug. 7.	"	35575	Great West Liquor Co., Calgary.	"	75	Edward L. Drewery, Winnipeg.	
" 7.	"	35576	Calgarrry Wine & Spirit Co., Calgary	"	75	Bass & Co., London, Eng.	
" 10	"	35577	Edmonton B. & M. Co., Calgary.	"	50	Vendors . . . . .	
" 10.	"	35600	Edmonton Wine & Spirit Co., Calgary	"	60	Bass & Co., London, Eng.	

DISTRICT OF VANCOUVER —

July 20.	Beer or Ale.	37681	Royal Brewing Co., 3 qts.	50	Vendors . . . . .	XXX brand . . . . .	
			Vancouver, B.C.				
" 20.	"	37682	Pacific Bottling Works, Vancouver.	"	60	Seattle B. & M. Co., Seattle, Wash.	
" 20.	"	37683	McLaren & Urquhart Vancouver.	"	60	Calgary Brewing Co., Calgary, Alta.	Bottled by A. E. Suckling & Co., Vancouver.
" 20.	"	37684	Hughes Bros., Vancouver.	"	45	Vancouver Brewries, Vancouver.	Alexandra . . . . .
" 20.	"	37685	A. E. Suckling, Vancouver.	"	60	Olympia Brewing Co, Olympia, Wash.	Olympia . . . . .

DISTRICT OF VICTORIA—

Aug. 5.	Beer or Ale.	41521	WindsorCroceryCo., 3 qts.	45	Victoria Phoenix Brewing Co., Victoria, B.C.	Victoria Phcenix Ale.	
			Victoria, B.C.				
" 5.	"	41522	Saunders Grocery Co., Ltd , Victoria.	"	75	Bass & Co., Burton-on-Trent, Eng.	Pale Ale. Bottled by Blood, Wolfe & Co., Liverpool.
" 6.	"	41523	West End Grocery Co., Ltd., Victoria.	"	50	Labatt's, London, Ont.	India Pale Ale . . . . .
" 6.	"	41524	Fred Carue, Victoria.	"	50	Silver Spring Brewery Co., Victoria, B.C.	Tates English Ale . . . . .
" 9.	"	41525	Copas & Young, Victoria.	"	50	Bass & Co., Burton-on-Trent, Eng.	Bottled by E. & J. Bourke, Dublin & Liverpool.



SESSIONAL PAPER No. 14

ALE (BEER).

RESULTS OF ANALYSIS.													
Sp. Gr. at 15.5°	Sp. Gr. of Distillate at 15.5°.	Sp. Gr. of Dealcologized residue.	Alcohol.			Sp. Gr. of Original Worts.	Malt used, lbs. per Gallon.	Total Solids in Beer (determined).	Residual Solids (from tables)	Solids in Original Worts.	Degree of Fermentation.	Preservatives.	No. of Sample.
			By Weight.	By Volume.	As proof spirit.								

R. W. FLETCHER, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.			
1.0063	0.9901	1.0148	5.81	7.25	12.70	1.0585	2.63	3.99	3.69	14.66	74.8	.....	35573
1.0083	0.9909	1.0171	5.31	6.63	11.62	1.0568	2.56	4.21	4.26	14.23	70.0	.....	35575
1.0014	0.9880	1.0108	7.27	9.04	15.85	1.0651	2.83	2.48	2.69	16.33	83.5	.....	35576
1.0012	0.9906	1.0104	5.50	6.86	12.03	1.0516	2.32	2.40	2.59	12.92	79.9	.....	35577
1.0021	0.9879	1.0128	7.33	9.13	15.99	1.0677	3.04	3.21	3.19	16.98	81.2	.....	35600

J. F. POWER, INSPECTOR.

1.0033	0.9935	1.0098	3.71	4.63	8.13	1.0362	1.63	2.30	2.44	9.05	7.30	.....	37681
1.0120	0.9923	1.0195	4.44	5.55	9.72	1.0517	2.33	4.63	4.86	12.94	62.4	.....	37682
1.0192	0.9942	1.0243	3.29	4.12	7.23	1.0474	2.13	6.12	6.06	11.86	48.9		37683
1.0133	0.9926	1.0205	4.25	5.32	9.31	1.0512	2.30	4.84	5.11	12.82	60.0	Sulphites	37684
1.0115	0.9925	1.0188	4.31	5.39	9.45	1.0500	2.25	4.44	4.69	12.52	62.5	...	37685

D. O'SULLIVAN, INSPECTOR.

1.0117	0.9961	1.0179	2.22	2.79	4.89	1.0326	1.47	4.38	4.46	8.14	45.2	.....	41521
1.0034	0.9885	1.0143	6.93	8.63	15.12	1.0608	2.74	3.39	3.56	15.24	76.6	.....	41522
1.0089	0.9914	1.0161	5.00	6.24	10.94	1.0531	2.39	4.12	4.01	13.30	69.9	...	41523
1.0079	0.9922	1.0150	4.50	5.63	9.86	1.0477	2.15	3.89	3.74	11.94	68.7	.....	41524
1.0064	0.9905	1.0158	5.56	6.94	12.16	1.0575	2.59	3.60	3.94	14.41	72.6	.....	41525



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not expression of opinion).
				Quantity.	Cents.		

DISTRICT OF NOVA SCOTIA—

1909.							
Aug. 16	Lager Beer..	41731	T. F. Courtney & Co., 6 Pts. Halifax, N.S.	90		Anheuser Busch B. Budweiser..... Co., St. Louis, U.S.	
" 16	"	41732	John Tobin & Co., 6 " Halifax, N.S.	75		Pabst Brewing Co., Blue Ribbon..... Milwaukee, U.S.	
" 16	"	41733	Kelley & Glassey, 6 " Halifax, N.S.	75		Jos. Schlitz Br. Co., ..... Milwaukee, U.S.	
" 16	"	41734	Dillon Bros., Hali- 6 " fax, N.S	70		Everard Brewing Co. Red Star..... New York, U.S.	
" 18	"	41735	John McGrath, Hali- 6 " fax, N.S.	1.00		Anheuser Busch B. Budweiser..... Co., St. Louis, U.S.	

DISTRICT OF NEW BRUNSWICK—

July 19	Lager Beer..	39506	Simeon Jones, Ltd., 3 Bots St. John, N.B	25		Canadian Breweries Ekerts..... Ltd., Montreal.	
" 21	"	39507	James Ready, Ltd., 3 " Fairville, St. John, N.B.	40		Vendors .....	
" 22	"	39508	John O'Regan, St. 3 " John, N.B.	40		Jos. Schlitz, B. Co., Schlitz ..... Milwaukee, U.S.	
" 23	"	39509	Comeau & Sheehan, 3 " St. John, N.B.	40		Anheuser Busch B. Budweiser..... Co., St. Louis, U.S.	
" 23	"	39510	Wm. E. McIntyre, 6 " St. John, N.B.	60		The Ebling B. Co., Sunlight..... New York, U.S.	

DISTRICT OF QUEBEC—

July 15	Lager Beer..	36777	E. A. Delisle, 29 3 Bots Cote Genevieve.	30		The Beauport Brew- ..... ing Co., Quebec.	
" 15	"	36778	Jules Rochette, 7 3 " Rue Deligny.	35		G. E. Amyot, Que- ..... bec.	
" 15	"	36779	J. B. Cote, 381 Rue 3 " St. Jean.	45		George Patry, Que- ..... bec.	
" 15	"	36780	E. Lafrance, 272 Rue 3 " St. Jean.	45		" " .....	
" 15	"	36781	" " 3 "	30		G. E. Amyot, Que- ..... bec.	

DISTRICT OF ST. HYACINTHE—

July 19	Lager Beer..	953	S. Gauthier, Farn- 3 Bots ham,	60		The Union Brewery, Kuntz..... Ltd., Montreal.	
" 22	"	954	M. H. Bernier, Vic- 3 " torioville.	75		L. Chaput Fils & Budweiser..... Cie., Montreal.	
Aug. 4	"	955	J. F. Chicoine, 3 " Rougemont.	40		Geo. E. Amyot B. B. B ..... Co., Ltd., Quebec.	
" 5	"	956	A. H. Hubert, 3 " Marieville.	60		L. Chaput Fils & Blue Ribbon ..... Cie., Montreal.	
" 5	"	957	R. Davignon, Iber- 3 " ville.	40		O. Archambault, Salvador ... Iberville.	



SESSIONAL PAPER No. 14

## LAGER BEER.

Specific Gravity at 15.5°.	Specific Gravity of Distillate at 15.5°.	Specific Gravity of Dealcoldized Residue.	RESULTS OF ANALYSIS.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
			Alcohol.			Specific Gravity of Original Worts.	Malt Used, Lbs. per Gallon.	Total Solids in Beer determined.	Residual Solids (from tables).	Solids in Original Worts.	Degree of Fermentation.	Preservatives.		
			By Weight.	By Volume.	As Proof Spirit.									

R. J. WAUGH, INSPECTOR.

			p.c.	p.c.	p.c.			p.c.	p.c.	p.c.				
1.0153	0.9931	1.0220	3.94	4.93	8.64	1.0503	2.26	5.18	5.49	12.59	56.4	.....	41731	
1.0199	0.9949	1.0247	2.89	3.62	6.34	1.0446	2.01	5.85	6.16	11.16	44.8	.....	41732	
1.0114	0.9931	1.0181	3.94	4.93	8.64	1.0464	2.09	4.18	4.51	11.61	61.1	.....	41733	
1.0166	0.9939	1.0225	3.47	4.34	7.61	1.0471	2.12	5.56	5.61	11.79	52.4	.....	41734	
1.0156	0.9935	1.0222	3.71	4.63	8.13	1.0486	2.18	5.41	5.54	12.16	54.4	.....	41735	

J. C. FERGUSON, INSPECTOR.

1.0101	0.9935	1.0204	3.71	4.63	8.13	1.0468	2.10	4.68	5.09	11.71	56.5	.....	39506	
1.0101	0.9931	1.0169	3.94	4.93	8.64	1.0452	2.03	3.80	4.81	11.31	62.8	.....	39507	
1.0113	0.9930	1.0181	4.00	5.00	8.77	1.0469	2.11	4.10	4.51	11.74	61.6	.....	39508	
1.0161	0.9936	1.0221	3.65	4.56	8.00	1.0481	2.16	5.46	5.51	12.04	54.2	.....	39509	
1.0158	0.9938	1.0215	3.53	4.42	7.74	1.0465	2.09	4.83	5.36	11.63	53.9	.....	39510	

E. BELAND, INSPECTOR.

1.0131	0.9928	1.0201	4.12	5.16	9.04	1.0498	2.24	4.79	5.01	12.47	59.7	.....	36777	
1.0140	0.9939	1.0200	3.47	4.34	7.61	1.0446	2.00	4.84	4.99	11.16	55.3	.....	36778	
1.0161	0.9929	1.0232	4.06	5.08	8.90	1.0524	2.36	5.72	5.79	13.12	55.1	.....	36779	
1.0164	0.9939	1.0226	3.47	4.34	7.61	1.0472	2.12	5.45	5.64	11.81	52.2	.....	36780	
1.0131	0.9938	1.0193	3.53	4.42	7.74	1.0443	1.99	4.59	4.81	11.08	74.6	.....	36781	

J. C. ROULEAU, INSPECTOR.

1.0158	0.9937	1.0222	3.59	4.49	7.87	1.0479	2.15	4.95	5.54	11.94	53.6	.....	953	
1.0153	0.9932	1.0220	3.88	4.85	8.51	1.0498	2.24	5.16	5.49	12.47	64.0	.....	954	
1.0124	0.9934	1.0192	4.00	5.00	8.77	1.0480	2.16	4.44	4.79	12.01	60.1	.....	955	
1.0175	0.9948	1.0227	2.94	3.69	6.47	1.0431	1.94	5.54	5.66	10.78	47.5	.....	956	
1.0114	0.9946	1.0171	3.06	3.83	6.72	1.0384	1.73	4.00	4.26	9.60	55.6	.....	957	



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

DISTRICT OF MONTREAL—

1909.							
July 15	Lager Beer..	40250	Reinhardt & Sons, 3 Bots Montreal.	30	Vendors.....	Vienna .....	
" 15	"	40251	The Nat. Breweries, Ltd., Montreal.	" 25	" .....	Ekers Bohemian ..	
" 19	"	40253	B. Ram, 395 St. Lawrence St., Montreal	" 34	Union Brewing, Ltd. ....	Montreal.	
" 19	"	40254	G. Daoust, 140 St. Cath, E, Montreal	50	Reinhardt & Co., Salvador.....	Toronto.	
" 19	"	40255	F.X. St. Charles, Ltd 6 St.Gabr'l st, Mon'l	70	Schlitz, Milwaukee.. Schlitz.....		

DISTRICT OF OTTAWA—

Aug. 23	Lager Beer..	41249	The Carling B. & M. Co., Ltd., Ottawa.	6 Pts. 60	Vendors.....	Canada Club .....	
" 23	"	41250	The Capital B. & M. Co., Ltd., Ottawa.	" 35	" .....	Capital .....	
" 24	"	41251	L. Davis, Ottawa..	" 60	O'Keefe's, Ltd., To ronto.	Pilsener.....	
" 24	"	41252	Chelsea Trading Co.,	" 75	Unknown.....	Schlitz .....	
" 24	"	41253	" "	" 75	Anheuser Busch B. Co., St. Louis, U.S	Budweiser .....	

DISTRICT OF KINGSTON—

Aug. 5	Lager Beer..	41165	R. Stevenson, King- ston.	3 Bots 45	Bajus Brewery ..		
" 5	"	41166	R. J. Lawlor, King ston.	" 45	Reinhardt & Co., Toronto.		
" 5	"	41167	J. McParland, King- ston.	" 45	Schlitz, Milwaukee.		
" 6	"	41168	Wesley Bullen, Belle- ville.	" 45	Carling, London, Ont		
" 6	"	41169	W. D. Rodbourne, Belleville.	" 45	O'Keefe, Toronto ...		

DISTRICT OF TORONTO—

Aug. 11	Lager Beer..	41334	The Hamilton Brew. Asso, Ltd, Hamilt'n	3 Bots 60	Vendors ...	Regal.....	
" 18	"	41335	W.J. Donley, 205 Par liament st., Toronto	" 45	Copeland B. Co., Ltd Toronto.	Budweiser C. B. Co., Ltd., C.B. Co.	
" 18	"	41336	Thos. Walker, 212 Queen st,e, Toronto	" 45	Reinhardt & Co., Toronto.	Bavarian.....	
" 18	"	41337	T.K. Haffey, 216 Wil ton Ave., Toronto.	" 45	The O'Keefe B. Co., Ltd, Toronto.	Pilsener .....	
" 19	"	41338	D. Hayes, 420 King st., e, Toronto.	" 45	The Korman B. Ltd Toronto.	Perfecto .....	



SESSIONAL PAPER No. 14

LAGER BEER.

Specific Gravity at 15.5°.	Specific Gravity of Distillate at 15.5°.	Specific Gravity of Dealcologized residue.	RESULTS OF ANALYSIS.										No. of Sample.	Remarks, and Opinion of the Chief Analyst.
By Weight.	By Volume.	As Proof Spirit.	Alcohol.			Sp. Gravity of Original Worts.	Malt used, lbs. per Gallon.	Total Solids in Beer (determined).	Residue Solids (from tables.)	Solids in Original Worts.	Degree of Fermentation.	Preservatives.		

J. J. COSTIGAN, INSPECTOR.

			p.c.	p.c.	p.c.			p.c.	p.c.	p.c.				
1.0035	0.9934	1.0102	3.76	4.71	8.26	1.0371	1.67	2.13	2.54	9.27	72.6	.....	40250	
1.0125	0.9938	1.0184	3.53	4.42	7.74	1.0434	1.95	4.34	4.59	10.85	57.6	.....	40251	
1.0126	0.9938	1.0189	3.53	4.42	7.74	1.0439	1.97	4.37	4.71	10.98	57.1	.....	40253	
1.0090	0.9936	1.0161	4.00	5.00	8.77	1.0449	2.02	3.75	4.01	11.23	64.2	.....	40254	
1.0140	0.9937	1.0204	3.59	4.49	7.87	1.0459	2.06	4.80	5.09	11.48	55.6	.....	40255	

J. A. RICKEY, INSPECTOR.

1.0147	0.9943	1.0204	3.24	4.05	7.10	1.0431	1.94	4.87	5.09	10.78	52.7	.....	41249	
1.0090	0.9934	1.0151	3.76	4.71	8.26	1.0420	1.89	3.35	3.76	10.50	64.2	.....	41250	
1.0086	0.9938	1.0146	3.53	4.42	7.74	1.0396	1.78	3.24	3.64	9.90	63.2	.....	41251	
1.0115	0.9931	1.0184	3.94	4.93	8.64	1.0467	2.10	4.32	4.59	11.68	60.7	.....	41252	
1.0155	0.9932	1.0222	3.88	4.85	8.51	1.0509	2.25	5.12	5.54	12.52	55.7	.....	41253	

JAS. HOGAN, INSPECTOR.

1.0100	0.9945	1.0155	3.12	3.90	6.84	1.0373	1.68	3.60	3.86	9.32	58.5	.....	41165	
1.0078	0.9925	1.0151	4.31	5.39	9.45	1.0463	2.08	3.65	3.76	11.58	67.5	.....	41166	
1.0138	0.9938	1.0204	3.53	4.42	7.74	1.0454	2.04	4.76	5.09	11.36	55.1	.....	41167	
1.0114	0.9943	1.0173	3.24	4.05	7.10	1.0400	1.80	3.96	4.31	10.00	56.9	.....	41168	
1.0098	0.9937	1.0161	3.59	4.49	7.87	1.0416	1.87	3.81	4.01	10.40	61.4	.....	41169	

H. J. DAGER, INSPECTOR.

1.0154	0.9935	1.0220	3.71	4.63	8.13	1.0484	2.18	5.26	5.49	12.11	54.0	.....	41334	
1.0124	0.9927	1.0202	4.19	5.24	9.18	1.0504	2.27	4.80	5.04	12.62	60.0	.....	41335	
1.0110	0.9925	1.0169	4.31	5.39	9.45	1.0481	2.16	4.42	4.21	12.04	65.0	.....	41336	
1.0075	0.9932	1.0132	3.88	4.85	8.51	1.0410	1.85	3.36	3.29	10.25	67.9	.....	41337	
1.0051	0.9936	1.0110	3.65	4.56	8.00	1.0370	1.67	2.45	2.74	9.25	70.4	.....	41238	



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

DISTRICT OF LONDON—

1909.							
July 22.	Lager Beer.	30635	E. J. Watson, Guelph.	3 bots.	25	Holliday. ....	East Kent Lager. . .
" 23.	"	30693	Walsh Brothers, Stratford.	"	30	Kuntz & Co., Waterloo.	.....
" 26.	"	30801	Walter Sault, Goderich.	"	40	Berlin Brewery.....	.....
" 29.	"	30812	Chas. B. Pugh, Clinton.	"	30	Cosgrove Brewing Co., Toronto.	.....

DISTRICT OF WINDSOR—

" 22.	Lager Beer.	35975	E. B. Smith, London, Ont.	3 bots.	32	H. Kuntz, Hamilton.	.....
" 22.	"	35976	E. B. Smith, London.	"	33	C. H. Huether, Hamilton.	.....
" 22.	"	35977	Ed. Shea, London, Ont.	"	35	Kuntz Brewing Co., Waterloo.	.....
" 22.	"	35978	Ed. Shea, London, Ont.	"	35	Carling B. & M. Co., London, Ont.	.....
" 22.	"	35979	Scandrett Bros	....	38	Schlitz Co., Milwaukee, U.S.	.....

DISTRICT OF MANITOBA—

July 23.	Lager Beer.	39746	Blackwood Limited, Winnipeg.	3 bots.	....	Vendors.....	.....
" 23.	"	39747	P. Shea, Winnipeg.	"	..	McDonagh & Shea, Winnipeg.	.....
" 23.	"	39748	Lemire & Co., Winnipeg.	"	....	The Moosejaw B. & M. Co., Ltd., Moosejaw, Sask.	.....

DISTRICT OF CALGARY—

Aug. 5.	Lager Beer	35574	Lethbridge B. & M. Co., Ltd., Lethbridge.	3 qts.	50	Vendors	.....
July 29.	"	35578	Calgary B. & M. Co., Calgary.	"	50	"	.....
" 29.	"	35579	Golden West B. Co., Calgary.	"	50	"	.....
Aug. 10.	"	35580	Strathcona B. & M. Co., Strathcona.	"	50	"	.....
" 10.	"	35581	Edmonton B. & M. Co., Edmonton.	"	50	"	.....



SESSIONAL PAPER No. 14

## LAGER BEER.

RESULTS OF ANALYSIS.													
Sp. Gr. at 5·15°	Sp. Gr. of Distillate at 15·5°	Sp. Gr. of Dealcobolized residue.	Alcohol.			Sp. Gr. of Original Worts.	Malt used, lbs. per Gallon.	Total Solids in Beer (determined.)	Residual Solids (from tables).	Solids in Original Worts.	Degree of Fermentation.	Preservatives.	No. of Sample.
			By Weight.	By Volume.	As proof spirits.								

T. KIDD, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.			
1·0094	0·9940	1·0152	3·41	4·27	7·49	1·0393	1·77	3·40	3·79	9·82	61·4	.....	30685
1·0164	0·9940	1·0227	3·41	4·27	7·49	1·0468	2·10	5·35	5·66	11·71	51·6	.....	30693
*	*	*	*	*	*	*	*	*	*	*	*	.....	30801
1·0157	0·9947	1·0209	3·00	3·76	6·58	1·0418	1·88	4·82	5·21	10·45	50·1	.....	30812

JNO. TALBOT, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.			
1·0172	0·9939	1·0230	3·47	4·34	7·61	1·0476	2·14	5·41	5·74	11·91	51·8	.....	35975
1·0131	0·9941	1·0191	3·35	4·20	7·36	1·0427	1·92	4·37	4·76	10·68	55·4	.....	35976
1·0164	0·9945	1·0221	3·12	3·90	6·84	1·0439	1·97	5·13	5·51	10·98	49·8	.....	35977
1·0146	0·9943	1·0200	3·24	4·05	7·10	1·0427	1·92	4·70	4·99	10·68	53·3	.....	35978
1·0096	0·9927	1·0167	4·19	5·24	9·15	1·0469	2·11	3·78	4·16	11·74	64·5	.....	35979

A. C. LARIVIERE, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.			
1·0156	0·9940	1·0208	3·41	4·27	7·49	1·0449	2·02	4·70	5·19	11·23	53·8	.....	39746
1·0144	0·9938	1·0205	3·53	4·42	7·74	1·0455	2·05	4·62	5·11	11·38	55·1	.....	39747
1·0180	0·9945	1·0233	3·12	3·90	6·84	1·0451	2·03	5·42	5·81	11·28	4·85	.....	39748

R. W. FLETCHER, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.			
1·0161	0·9942	1·0218	3·29	4·12	7·23	1·0449	2·02	5·32	5·44	11·23	51·5	.....	35574
1·0157	0·9939	1·0220	3·47	4·34	7·61	1·0466	2·10	5·22	5·49	11·66	52·9	.....	35578
1·0137	0·9937	1·0199	3·59	4·49	7·87	1·0454	2·04	4·73	4·96	11·36	56·3	.....	35579
1·0110	0·9936	1·0174	3·65	4·56	8·00	1·0434	1·95	4·05	4·34	10·85	60·0	.....	35580
1·0151	0·9934	1·0215	3·76	4·71	8·26	1·0484	2·18	5·22	5·36	12·11	55·7	.....	35581

\* Sample not received.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.		

DISTRICT OF VANCOUVER—

1909.							
July 21.	Lager Beer.	37686	Gold Seal Liquor Co., Vancouver.	3 qts.	50	Victoria Phoenix B. Co., Victoria.	
" 21.	"	37687	J. P. Turner. Vancouver.	"	75	Anheuser Busch B. Association Ltd., St. Louis, U.S.	Budweiser.....
" 21.	"	37688	3 Star Wine Co., Vancouver.	"	50	Dorfes Brewery, Washington.	
" 21.	"	37689	H. A. Urquhart, Vancouver.	"	75	Lemps, St. Louis, U.S.	
" 22.	"	37690	Vancouver Breweries Vancouver.	"	50	Vancouver Breweries Cascade Ltd.	

DISTRICT OF VICTORIA—

Aug. 5.	Lager Beer.	41516	Windsor Grocery Co., Victoria, B.C.	3 qts.	75	Anheuser Busch B. Association Ltd., St. Louis, U.S.	Budweiser.....
" 5.	"	41517	Saunders Grocery Co., Ltd., Victoria, B.C.	"	75	America Brewing Co., St. Louis, U.S.	A.B.C. Bohemian....
" 6.	"	41518	Fred. Carne, Victoria, B.C.	"	40	Vancouver Breweries Ltd., Vancouver.	Cascade ....
" 6.	"	41519	D. H. Ross & Co., Victoria, B.C.	"	45	Victoria Phoenix B. Co., Victoria, B.C.	Victoria Phoenix Export.
" 6.	"	41520	D. H. Ross & Co., Victoria, B.C.	"	60	Seattle B. & M. Co., Seattle, U.S.	Rainier Beer.....



SESSIONAL PAPER No. 14

LAGER BEER.

RESULTS OF ANALYSIS.

Sp. Gr. at 15.5.	Sp. Gr. of Distil- late at 15.5°.	Sp. Gr. of Deal- coholized resi- due.	Alcohol.			Sp. Gr. of Original Worts.	Malt used, lbs. per Gallon.	Total Solids in Beer, (deter- mined).	Residual Solids (from tables).	Solids in Original Worts.	Degree of Fer- mentation.	Preservatives.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
			By Weight.	By Volume.	As proof spirit.									

J. F. POWER, INSPECTOR.

			p. c.	p. c.	p. c.				p. c.	p. c.	p. c.			
1.0115	0.9935	1.0181	3.71	4.63	8.13	1.0445	2.00	4.19	4.51	11.13	59.5	.....	37686	
1.0153	0.9931	1.0217	4.00	5.00	8.77	1.0500	2.25	5.44	5.41	12.52	56.8	.....	37687	
1.0118	0.9928	1.0193	4.12	5.16	9.04	1.0492	2.21	4.81	4.81	12.31	60.9	.....	37688	
1.0090	0.9924	1.0165	4.37	5.47	9.58	1.0482	2.17	3.89	4.11	12.06	65.7	.....	37689	
1.0153	0.9923	1.0228	4.44	5.55	9.72	1.0550	2.47	5.34	5.69	13.78	58.7	.....	37690	

D. O'SULLIVAN, INSPECTOR.

1.0151	0.9934	1.0219	3.76	4.71	8.26	1.0488	2.20	5.27	5.46	12.21	55.2	.....	41516	
1.0130	0.9929	1.0198	4.06	5.08	8.90	1.0490	2.20	4.67	4.94	12.26	59.7	.....	41517	
1.0162	0.9930	1.0234	4.00	5.00	8.77	1.0522	2.35	5.68	5.84	13.07	55.3	.....	41518	
1.0127	0.9943	1.0180	3.24	4.05	7.10	1.0407	1.83	4.34	4.49	10.18	55.9	.....	41519	
1.0125	0.9924	1.0202	4.37	5.47	9.58	1.0471	2.12	4.57	5.04	11.79	57.2	.....	41520	







SESSIONAL PAPER No. 14

## APPENDIX R.

## BULLETIN No. 197—LIME FRUIT JUICE (LIME JUICE.)

OTTAWA, January 12, 1910.

W. J. GERALD, ESQ.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to submit herewith a report upon 76 samples, purchased as lime juice, throughout the different inspectoral districts of Canada in December of 1909 and January, 1910.

The last examination (comprising 27 samples) of lime juice was made in 1902, and the results are published in Bulletin No. 83.

At that time I was supplied with six (6) samples of lime juice, whose genuineness was vouched for by the importers. These samples contained free citric acid averaging 7.74 per cent. A mean content of 7.66 per cent of free citric acid is yielded by the results of analysis of 42 samples of the present collection, which appear to be genuine, except that some may contain small amounts of added water. It would thus seem justifiable to establish at least 7.5 per cent of free citric acid as a normal amount for lime juice. When the article contains decidedly less than this amount, it is reasonable to infer the addition of water; and as the number 7.5 per cent has been deduced from a list of 42 samples, including 13 which show less than 7 per cent citric acid, it cannot be held that the standard suggested is too high.

The present report comprises :—

9	samples, sold as lime juice cordials.
42	" judged to be genuine lime juice.
13	" judged to be abnormal, but are not declared to be adulterated.
12	" adulterated under the Act.

In the absence of legal limits for density, citric acid content and other definitive characters of lime juice, it is impossible to declare adulteration in the cases of those samples which I have marked 'doubtful.' Where, however, there is addition of matter quite foreign to lime juice, and manifestly added for the purpose of taking the place of some natural constituent of lime juice, the article is clearly adulterated under Section 3 (a), (b), (c). It is not certain that the addition of a dye to *true lime juice* can be held to constitute adulteration; but the addition of a dye to a solution of tartaric acid in water is evidently made for the purpose of concealing inferiority and of enabling the product to be taken for a true lime juice. This constitutes adulteration under Section 3 (h).

Guided by the principles laid down, I have to declare twelve (12) samples of the present collection adulterated. Adulteration consists in the addition of tartaric acid as a substitute for citric acid, the natural acid of lime fruit, and in the use of a dye for the purpose of imitating the natural yellow colour of lime juice.



1 GEORGE V., A. 1911

Were the samples in question sold as ‘compounds,’ they could not be declared adulterated, since Section 24 (d) of the Act provides for such articles. But I find nothing on the labels which could inform the purchaser that he was being supplied with anything else than the genuine juice of the lime fruit, and our inspectors have invoiced these samples as sold to them for lime juice.

In the case of thirteen (13) other samples I have used the word ‘doubtful.’ It will be readily understood that this word implies some standard of reference. The most important characteristic of the juice of the lime fruit is the presence of citric acid, associated with a natural fruit flavour, which gives palatability to the article as a beverage. The simplest form of adulteration is evidently the addition of water to the juice. This would have the effect of lowering the specific gravity (density), and of reducing the percentage of contained citric acid. In order to determine whether or not water has been added, it is necessary to establish the normal density of lime juice and to ascertain the normal percentage content of citric acid therein; also to determine the variations from such normal which may be exhibited by genuine lime fruit juice. Another character of lime fruit juice is its optical activity, and in the subjoined table I have brought together the results of recorded work upon samples believed to be genuine

No.	SPECIFIC GRAVITY.			CITRIC ACID.			Optical rotation in 2 dm tube.	Number of Samples.
	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	Mean.		
1	1·0398	1·0363	1·0381	8·12	7·35	7·74	+0°·0	6
2	1·0389	1·0265	1·0348	7·68	6·61	7·20	.....	5
3	.....	.....	1·0343	7·84	6·36	7·12	—0°·3	4
4	1·0403	1·0266	1·0331	8·82	6·02	7·66	—0°·5 to +0°·5	42
Means .....			1·0339	.....	.....	7·57	.....	57

1. From examination of 6 samples, Bull. 83, p. 17.
2. " " 5 " König, Nahrungs und Genussmittel, Bd. I, p. 887.
3. " " 4 " " " " p. 1504.
- It is not certain that the numbers quoted refer to lime juice proper, and not to lemon juice.
4. From examination of 42 samples, reported in this Bulletin and probably genuine, but not guaranteed as such.

An examination of the tabulated results of analysis, and their comparison with the above means, will show the grounds upon which I have felt justified in declaring thirteen (13) samples to be of doubtful genuineness.

The standards for lime juice issued by the Bunde Deutscher Nahrungsmittel-Fabrikanten und Handler (Deutsches Nahrungsmittelbuch: Zweite Auflage) in 1909, recognize (page 286) a first pressed juice (Muttersaft) and a second pressed juice (Nachpresse). This second pressing is the result of addition of water to the residue left from a first pressing of the fruit, and the product is necessarily a very inferior article. When the product of a second pressing is added to the first pressed juice it is required that the fact should be distinctly stated upon the label and that the article be sold as a mixture (Fruchtsaft mit Nachpresse). It may be that the low grade lime juice samples which I have characterized as doubtful are mixtures of the kind indicated. If such is the case, they should undoubtedly be plainly labelled in conformity with the facts.



## SESSIONAL PAPER No. 14

## LIME FRUIT JUICE CORDIALS, OR LIME JUICE CORDIALS.

Nine samples are labelled as *Cordials*. This term is apparently applied to a diluted and sweetened lime juice, and a lime juice cordial differs from plain lime juice merely by the addition of water and sugar. The amount of water added varies much in different brands ; and for the nine samples now reported, the extremes are about 43 per cent, and 81 per cent, calculated from the citric acid content. The amount of sugar added varies from about 20 per cent to over 50 per cent.

Since the lime juice is the characteristic component of these articles, it is evident that their value varies greatly, and the following conspectus is of interest :—

Sample.	Specific Gravity.	Citric Acid.	Added Water.	Approximate sugar added.
36695.....	1·1062	3·57	53·	20
38888.....	1·0984	1·43	81·	20
40383.....	1·1206	2·17	71·	25 (Glucose).
42868.....	1·2788	3·92	49·	50 (No preservatives).
42785.....	1·2301	2·87	62·	45
30872.....	1·2896	3·67	52·	50 (No preservatives).
44709.....	1·2351	4·34	43·	45 (No preservatives).
37801.....	1·1392	2·72	64·	30
40381.....	1·0168	7·00	8·	0 (No preservatives).

With four exceptions, these articles contain salicylic acid as a preservative. No mention of this fact is made on the label. Number 40381 is exceptional among these cordials in containing a high percentage of citric acid, very little added water, no sugar, and 7·27 per cent of alcohol equivalent to 15·85 per cent of proof spirit. This article is legally saleable only as a drug, or as an alcoholic beverage.

I beg to recommend the publication of this report as Bulletin No. 197.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



1 GEORGE V., A. 1911  
BOTTLED

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Quantity.	Cost.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report (Is not an expression of opinion.)
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DISTRICT OF NOVA SCOTIA—

1909.					\$	c.	
Dec.	7	Bottled Juice.	Lime	41760	R. B. Adams & Co., Halifax, N.S.	3 bots.	0 30 Dominion Syrup Co., Labelled pure.... Halifax, N.S.
"	6	"	"	41761	National Drug Co., Halifax, N.S.	"	0 25 Vendors.... Sovereign Brand..
"	7	"	"	41762	Wentzells, Ltd., Hal- fax, N.S.	"	0 30 Croskill & Co., Hal- West India..... fax, N.S.
"	8	"	"	41763	G. A. Cook & Co., Halifax, N.S.	"	0 30 Unknown..... "
"	15	"	"	41764	B. O. Bishop, Dart- mouth, N.S.	"	0 30 Nat. Drug & Chem. Sovereign Brand.. Co., Halifax, N.S.

DISTRICT OF PRINCE EDWARD ISLAND—

Dec.	7	Bottled Juice.	Lime	38611	A. B. Paquet, Souris.	3 pts.	0 45 Frances Drake, New Glasgow, N.S.
"	7	"	"	38612	Vincent McIsaac "	"	0 45 Bauld Bros., Ltd., Pure West India Halifax, N.S. Lime Juice.
"	8	"	"	38613	H. Connolly, Char- lottetown.	"	0 45 Sussex Mineral Spr'g Extra fine West Co., Sussex, N.B. India Lime Juice.
"	10	"	"	38614	R. T. Holman, Ltd., Summerside.	"	0 45 National Drug Co., Sovereign Lime Halifk. Juice.
"	10	"	"	38615	Sinclair & Stewart, Summerside.	"	0 45 Havelock Mineral Spring Co., Have- lock, N.S.

DISTRICT OF NEW BRUNSWICK—

Dec.	2	Bottled Juice.	Lime	39623	The National Drug & Chemical Co., Ltd., St. John, N.B.	3 bots.	0 30 J. Cox Fillan, Domi- nica, W.I.	Received in bulk. Bottled by ven- dors.
"	14	"	"	39624	R. T. Mack, Frederic- ton, N.B.	"	0 40 Nat. Drug & Chem. Co., Montreal.	West India Lime Juice. Received in bulk. Bottled by vendors.
"	16	"	"	39625	Geo. F. Crawford, St. Stephen, N.B.	"	0 40 Can. Drug Co., Ltd., St. John, N.B.	Pure West India Lime Juice.
Jan.	5	"	"	39626	Fairweather Bros., Moncton.	"	0 50 Nat. Drug & Chem. Co., Ltd., Montreal.	'Montserrat'.....
"	5	"	"	39627	J. McD. Cooke, Mon- cton.	"	0 35 Nat. Drug & Chem. Co., Ltd., Toronto.	'Sovereign' .....

DISTRICT OF QUEBEC—

Dec.	10	Bottled Juice.	Lime	36692	W. G. Doyle, West Frenton.	3 bots.	1 35 Whitead & Turner, Quebec.
"	10	"	"	36693	Lacasse & Audet, St. Edouard Frenton.	"	0 75 N. Turcotte & Cie, Quebec.
"	22	"	"	36694	J. Masson, 808 Rue St Valier.	"	0 75 National Drug Co., Montreal.
"	22	"	"	36695	Jos. Falardeau, 271 Rue St. Joseph.	"	0 75 L. B. Renaud & Cie., Quebec.
"	22	"	"	36696	"	"	1 05 J. A. Chabot, Que- bec.



SESSIONAL PAPER No. 14

## LIME JUICE.

RESULTS OF ANALYSIS.						Number of Sample.	Remarks and Opinion of the Chief Analyst.
Specific Gravity at 15° C.	Acidity per 100 cc in terms of ccN.	Per cent weight in Vol.-Acidity calculated as citric acid.	Rotation in 2 drm. tube.	Preservatives.	Reaction with alcohol (after evaporation to a Syrup.)		

R. J. WAUGH, INSPECTOR.

1·0290	80·5	5·63	0·0	Salicylic acid present.	Bulky ppte..	41760	Low in acidity and contains a preservative.
1·0344	112·0	7·84	0·0	Salicylic acid trace.	" ..	41761	Genuine with trace of a preservative.
1·0313	98·5	6·89	—0·4	Salicylic acid present.	" ..	41762	Genuine but contains a preservative.
1·0294	90·0	6·30	—0·2	Salicylic acid trace.	" ..	41763	Genuine with a trace of preservative.
1·0340	108·0	7·56	—0·4	Salicylic acid present.	" ..	41764	Genuine but contains a preservative.

THEO. MOORE, INSPECTOR.

1·0220	67·5	4·72	+1·5	Salicylic acid present.	Bulky ppte..	38611	Contains tartaric acid. Adulterated.
1·0328	102·5	7·17	0·0	" ..	" ..	38612	Genuine but contains a preservative.
1·0364	116·0	8·12	—0·4	Salicylic acid trace.	" ..	38613	Genuine but with a preservative added.
1·0345	111·5	7·80	0·0	Salicylic acid present.	" ..	38614	Genuine with a preservative.
1·0403	125·0	8·75	0·0	" ..	" ..	38615	Genuine but contains a preservative.

J. C. FERGUSON, INSPECTOR.

1·0398	123·0	8·61	—0·5	None .. . . .	Bulky ppte..	39623	Genuine.
1·0364	115·5	8·08	—0·4	" .. . . .	" ..	39624	"
1·0390	126·0	8·82	0·0	Salicylic acid present.	" ..	39625	Genuine but contains a preservative.
1·0348	114·0	7·98	0·0	None .. . . .	" ..	39626	Genuine.
1·0346	111·0	7·77	—0·5	" .. . . .	" ..	39627	"

E. BELAND, INSPECTOR.

1·0347	114·5	8·01	—0·1	None .. . . .	Bulky ppte..	36692	Genuine.
1·0287	90·0	6·30	0·2	" .. . . .	" ..	36693	"
1·0296	93·5	6·54	—0·3	" .. . . .	" ..	36694	"
1·1062	51·0	3·57	—27·8	Salicylic acid present.	Ppte. below normal.	36695	Rotation after inversion —27·8. Contains a yellow dye (small amount). Sold as a cordial.
1·0348	111·0	7·77	0·0	None .. . . .	Bulky ppte..	36696	Genuine.



1 GEORGE V., A. 1911  
BOTTLED LIME

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Quantity.	Cost.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (is not an expression of opinion.)
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DISTRICT OF ST. HYACINTHE—

1909.					\$ c.		
Dec. 7	Bottled Lime Juice.	38884	Pharm. Larochelle, 3 Bots Sorel.	75		Nat. Drug & Chem. Co, Ltd, of Canada	'Sovereign' Brand.
" 10	"	38885	A. Foisy, St. Jean...	1.20		L. Chaput fils & Cie, Montreal.	'Montserrat.'.....
" 21	"	38886	A. H. Moore & Co., Magog.	75		Nat. Drug & Chem. Co, Ltd, of Canada	'Sovereign.'.....
" 21	"	38887	L. H. Oliver, Sherbrooke.	1.05		"	'Montserrat.'.....
" 23	"	38888	Thos. Hebert, St. Hyacinthe.	75		Robt. Simpson & Co., Montreal.	'Montebello.'.....

DISTRICT OF MONTREAL—

Dec. 3	Bottled Lime Juice.	40381	Jno. T. Lyons, Co. Incorp. 8 Bleury St., Montreal.	3 Bots	38	Riolleti & Co., St. Thomas.	Lime Juice Cordial
" 4	"	40382	St. Lawrence Grocery Co., 395 St. Lawrence B., Montreal.	"	75	T. A. Lyttle Co., Toronto.	'Sterling.'.....
" 4	"	40383	R. Blain, 8 Guilbault St., Montreal.	"	60	Sutcliffe & Bingham Ltd., Manchester.	'K. Kovat.'.....
" 4	"	40384	Nat. Drug & Chem. Co., Ltd., 31 Gabriel St., Montreal.	"	65	Nat. Drug & Chem. Co., Ltd.	'Sovereign.'.....
" 4	"	40385	Lyman's, Ltd., St. Paul St., Montreal.	"	66	Lyman's, Ltd., Montreal.	Dominica.....

DISTRICT OF OTTAWA—

Dec. 6	Bottled Lime Juice.	42866	R. E. Powell, Ottawa.	3 Bots	75	T. A. Lyttle Co., Ltd., Toronto.	'Sterling.'.....
" 10	"	42867	Gloucester Trading Co., Ottawa.	"	1.05	H. N. Bate & Sons, Ottawa.	'Montserrat.'.....
" 10	"	42868	S. J. Major, Ltd., Ottawa.	"	25	Nat. Drug & Chem. Co., Ltd., Halifax.	Sovereign Lime Juice Cordial.
" 14	"	42869	C. A. Adams, Kemptville.	"	1.05	Turner & Co. Toronto.	Turner's Lime Fruit Juice.
" 17	"	42870	G. A. Aiken, Finch..	"	75	Fur. by T. W. Chamberlain, Prescott, Mfg. by Lyon Silverman, Montreal.	Labelled Lime Fruit Juice, full strength.
" 17	"	42894	P. Lamoureux, Ottawa.	"	75	Unknown.	'Sterling.'.....



SESSIONAL PAPER No. 14

## JUICE—Continued.

RESULTS OF ANALYSIS.						Number of Sample.	Remarks and Opinion of the Chief Analyst.
Specific Gravity at 15°C.	Acidity per 100 cc in terms of ccN.	Per cent weight in Vol.-Acidity calculated as ci- tric acid.	Rotation in 2 dm. tube.	Preservatives.	Reaction with alcohol (after evaporation to a Syrup.)		
J. C. ROULEAU, INSPECTOR.							
		p.c.					
1.0292	93.0	6.51	—0.2	None .....	Bulky ppte.	38884	Genuine.
1.0350	114.0	7.98	—0.4	" .....	" ..	38885	"
1.0276	87.5	6.12	—0.2	" .....	" ..	38886	"
1.0360	118.0	8.26	0.0	" .....	" ..	38887	"
1.0984	20.5	1.43	—27.5	Salicylic acid present.	Very slight ppte.	38888	Rotation after inversion —27.8. Contains considerable sugar. Sold as a cordial. Contains a preservative.

## J. J. COSTIGAN, INSPECTOR.

1.0168	100.0	7.00	0.0	None	Very slight ppte. after stirring.	40381	Contains 15.85 p.c. proof spirits. Sold as a cordial.	
1.0175	60.5	4.23	+ 0.8	"	No ppte....	40382	Rotation after neutralizing +2.6. Contains a yellow aniline dye. Artificial and contains tartaric acid. Adulterated	
1.1206	31.0	2.17	+23.0	Salicylic acid trace.	Bulky ppte.	40383	Invert rotation +22.4. Contains considerable glucose. Sold as a cordial. Contains glucose and a preservative.	
1.0266	86.0	6.02	— 0.2	None	"	40384	Genuine.	
1.0285	98.0	6.86	0.0	"	"	40385	"	

## J. A. RICKEY, INSPECTOR.

1.0232	66.0	4.62	+ 3.5	None	Bulky ppte.	42866	Rotation after neutralizing +8.6. Contains a yellow aniline dye. Artificial and contains tartaric acid. Adulterated	
1.0348	114.0	7.98	— 0.2	"	"	42867	Genuine.	
1.2788	56.0	3.92	—77.6	"	"	42868	Rotation after inversion —76.4. Contains a large amount of sugar. Sold as a cordial.	
1.0422	89.0	5.60	— 3.8	Salicylic acid present.	Slight ppte.	42869	Rotation after neutralization —0.2. Contains a yellow aniline dye and tartaric acid. Is artificial. Adulterated.	
1.0185	61.0	4.27	+ 3.7	"	No ppte....	42870	Rotation after neutralizing +11.4. Contains a yellow aniline dye (strongly dyed) and tartaric acid. Is artificial. Adulterated.	
1.0231	68.0	4.76	+ 3.9	None	"	42894	Rotation after neutralization +11.6. Contains a yellow aniline dye and tartaric acid. Is artificial. Adulterated.	



1 GEORGE V., A. 1911  
BOTTLED LIME

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Quantity.	Cost.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
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DISTRICT OF KINGSTON—

1909					\$ c.		
Nov. 29	Bottled Juice.	Lime	42782 Nat. Drug Co., Kingston.	3 Bots	1.00	Evans Sons, Lescher & Webb, Liverpool & London.	.....
" 29	"	"	42783 A. P. Chown, Kingston.	"	75	Nat Drug Co.....	.....
" 29	"	"	42784 C. S. Prouse, Kingston.	"	75	" .....	.....
" 29	"	"	42785 G. Mahood, Kingston	"	1.05	Batger & Co., London.	.....
" 29	"	"	42786 W. W. Gibson, Kingston.	"	75	Nat. Drug Co.....	.....

DISTRICT OF TORONTO—

Dec. 3	Bottled Juice.	Lime	41441 H. G. Ainslie, Owen Sound.	3 bots.	0 60	The T. A. Lytle Co., Ltd., Toronto.	'Sterling' .....
" 7	"	"	41442 J. S. O'Neal, Welland	"	0 75	Alex. Riddle & Co., Ltd., London.	Stower's pure Lime Juice. Genuine as squeezed from the fruit.
" 16	"	"	41443 J. T. Festing, St. Catharines.	"	0 25	T. A. Lytle & Co., Toronto.	'Sterling' .....
" 17	"	"	41444 W. J. O'Brien, Hamilton.	"	0 30	Unknown.	.....
" 22	"	"	41445 M. Austin, Toronto Junction.	"	0 45	Lyman Bros. & Co., Ltd., Toronto.	'Crown' .....

DISTRICT OF LONDON—

Dec. 6	Bottled Juice.	Lime	30871 R. Wiler & Co., Guelph	3 bots.	0 30	Simpson Bros., Guelph.	.....
" 7	"	"	30872 Jackson & Son, "	"	0 75	Simpson Bros. & Co., Halifax.	.....
" 9	"	"	30883 Edward Flaherty, Stratford.	"	0 75	Taylor & Pringle, Owen Sound.	.....
" 21	"	"	44709 W. R. Butcher, St. Mary's.	"	0 30	Elliot, Mar & Co., London.	.....
1910. Jan. 5	"	"	44712 Jno. Levenston, Lis-towel.	"	0 75	Nat. Drug Co., Toronto.	.....



SESSIONAL PAPER No. 14

## JUICE—Continued.

RESULTS OF ANALYSIS.							Number of Sample.	Remarks and Opinion of the Chief Analyst.
Specific Gravity at 15 C.	Acidity per 100 cc in terms of cc N.	Per cent weight in Vol. Acidity calculated as citric acid.	Rotation in 2 drm. tube.	Preservatives.	Reaction with alcohol (after evaporation to a Syrup.)			

JAS. HOGAN, INSPECTOR.

		p. c.				
1·0350	112·0	7·84	— 0·5	None . . . . .	Bulky ppte.	42782 Genuine.
1·0344	111·0	7·77	0·0	Salicylic acid trace.	" .	42783 Genuine with trace of a preservative.
1·0278	88·0	6·16	— 0·4	None . . . . .	" .	42784 Genuine.
1·2301	41·0	2·87	—67·8	Salicylic acid present.	Slight ppte.	42785 Contains a large amount of sugar. In- vert rotation —70·0. Sold as a cordial. Contains a preservative.
1·0295	93·0	6·51	— 0·4	None . . . . .	Bulky ppte.	42786 Genuine.

H. J. DAGER, INSPECTOR.

1·0232	66·0	4·62	+3·6	None . . . . .	Bulky ppte.	41441 Rotation after neutralizing +8·8. Arti- ficial and contains tartaric acid. Adul- terated.
1·0340	106·5	7·45	—0·3	Salicylic acid present.	" ..	41442 Genuine but contains a preservative.
1·0188	56·0	3·92	+3·3	None . . . . .	No ppte....	41443 Rotation after neutralizing +10·0. Con- tains a yellow aniline dye and tartaric acid. Is artificial. Adulterated.
1·0316	100·0	7·00	0·0	Salicylic acid trace.	Bulky ppte.	41444 Genuine but contains a preservative.
1·0273	81·0	5·67	+0·5	Salicylic acid present.	" ..	41445 Abnormal and contains a preservative. Doubtful.

T. KIDD, INSPECTOR.

1·0349	112·5	7·87	+0·7	Salicylic acid trace.	Bulky ppte.	30871 Abnormal rotation and contains a trace of a preservative.
1·2896	52·5	3·67	—85·4	None . . . . .	Slight ppte.	30872 Contains a large amount of sugar. In- vert rotation —90·8. Sold as a cordial.
1·0311	96·0	6·72	+6·2	" . . . . .	No ppte...	30883 Rotation after neutralizing +17·8. Con- tains aniline dye and tartaric acid. Is artificial. Adulterated.
1·2351	62·0	4·34	—66·8	" . . . . .	.....	44709 Rotation after inversion —65·6. Contains a large amount of sugar. Sold as a cordial.
1·0262	83·5	5·84	—0·3	" . . . . .	.....	44712 Doubtful.



1 GEORGE V., A. 1911  
BOTTLED LIME

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Quantity.	Cost.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
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DISTRICT OF WINDSOR—

1909					\$ c.		
Dec. 9	Bottled Lime Juice.	42683	J. T. Wallace, Brantford.	3 bots.	0 90	C. F. Sutton, Sons & Co., London, Eng.	
" 10	"	42685	Ryan & Russell, London.	"	0 75	T. A. Lytle Co., Toronto.	'Sterling' .....
" 10	"	42688	Jno. Diprose, London	"	1 05	Montserrat Co., Liverpool and London, Eng.	
" 10	"	42693	T. A. Rowat & Co., London.	"	0 90	G. F. Sutton, Sons & Co., London, Eng.	
" 10	"	42694	A. McCormick & Son, London.	"	0 45	T. A. Lytle & Co., Toronto.	Labelled 'Lime Fruit Juice.'

DISTRICT OF MANITOBA—

Dec. 9	Bottled Lime Juice.	39831	C. Hoffman & Son, Winnipeg.	3 bots.	0 75	The Blackwoods, Ltd., Winnipeg.	Blackwood's Lime Fruit Juice.
" 10	"	39832	A. Hendry, Winnipeg	"	0 75	Campbell Bros. & Wilson, Winnipeg and Calgary.	'Royal Shield' ....
" 10	"	39833	J. D. Slov, Winnipeg	"	0 75	Unknown.	'Imperial' .....
" 13	"	39834	S. W. Elliott & Co., Winnipeg.	"	0 75	The Blackwoods, Ltd., Winnipeg.	Blackwood's Lime Fruit Juice.
" 16	"	39835	P. Nelson, Winnipeg.	"	0 50	Western Mfg. Co., Winnipeg.	'Maple Leaf' . ...

DISTRICT OF CALGARY—

Dec. 14	Bottled Lime Juice.	43636	Bole Drug Co., Ltd., Calgary.	3 bots.	1 50	Nat. Drug & Chem. Co., Toronto.	
" 14	"	43637	L. T. Mewburn & Co., Ltd., Calgary.	"	1 20	Montserrat Co., Island of Montserrat	
" 14	"	43638	Calgary Milling Co., Calgary.	"	1 50	The W. H. Malkin Co., Ltd., Vancouver.	
" 14	"	43639	Calgary Wine & Spirit Co., Calgary.	"	0 75	Taylor & Pringle Co, Owen Sound.	
" 14	"	43640	Campbell, Wilson & Horne Co., Ltd.	"	0 80	" "	



SESSIONAL PAPER No. 14

## JUICE—Continued.

## RESULTS OF ANALYSIS.

Specific Gravity at 15° C.	Acidity per 100 cc in terms of cc N.	Per cent weight in Vol.—Acidity calculated as cit- ric acid.	Rotation in 2 dm. tube.	Preservatives.	Reaction with alcohol (after evaporation to a Syrup.)	Number of Sample.	Remarks and Opinion of the Chief Analyst.
1.0306	86.5	6.05	−1.1	Salicylic acid	Bulky ppte.	42683	Abnormal rotation and contains a trace of a preservative.
1.0160	58.5	4.08	+0.2	None	Slight ppte.	42685	Rotation after neutralizing +0.4. Contains a yellow aniline dye. Is artificial. Low in acidity and otherwise doubtful.
1.0365	116.5	8.15	−0.3	"	Bulky ppte.	42688	Genuine.
1.0287	90.5	6.33	−0.2	"	"	42693	Genuine.
1.0188	55.5	3.88	+3.2	"	Slight ppte.	42694	Rotation after neutralizing +9.0. Contains a yellow aniline dye and tartaric acid. Is artificial. Adulterated.

JNO. TALBOT, INSPECTOR.

A. C. LARIVIERE, INSPECTOR.

1.0308	91.0	6.37	+0.5	None	Bulky ppte.	39831	Genuine.
1.0236	74.5	5.21	+0.4	Salicylic acid present.	"	39832	Acidity low and contains a preservative. Doubtful.
1.0255	80.0	5.60	0.0	"	"	39833	Acidity low and contains a preservative.
1.0341	108.0	7.56	+0.5	Salicylic acid trace.	"	39834	Genuine, with a trace of preservative.
1.0313	107.5	7.52	0.0	Salicylic acid present.	ppte. below normal.	39835	Genuine but contains a preservative.

R. W. FLETCHER, INSPECTOR.

1.0282	91.0	6.37	−0.1	None	Bulky ppte.	43636	Genuine.
1.0344	113.5	7.94	0.3	"	"	43637	"
1.0333	108.5	7.59	0.2	"	"	43638	"
1.0388	116.5	8.15	+7.5	"	No ppte.	43639	Rotation after neutralizing +21.0. Contains a yellow aniline dye and tartaric acid is artificial. Adulterated.
1.0282	84.0	5.88	+5.7	Salicylic acid present.	"	43640	Rotation after neutralizing +16.4. Contains a yellow aniline dye and tartaric acid is artificial. Adulterated.



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BOTTLED LIME

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Quantity.	Cent.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
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DISTRICT OF VANCOUVER—

1909.					\$	c.		
Dec. 13	Bottled Juice.	Lime	37798 Kelly, Douglas & Co., Vancouver.	3 pts.	0	75	Vendors.....	'Nabob' Pure Lime Fruit Juice
" 13	"	"	37799 Hudson Bay Co., Vancouver.	"	1	05	Kops Breweries.....	Made from the finest Lime Juice. Special quality West India Lime Juice.
" 14	"	"	37800 W. H. Malkin Co., Ltd., Vancouver.	"	0	90	L. Rose & Co., Ltd..	Is entirely free from alcohol.
" 14	"	"	37801 W. J. McMillan & Co. Vancouver.	"	0	90	Albert Riddell & Co.	Prepar'd from their original Lime Juice Syrup Receipt. This cordial m'd. from pure juice of fruit free from alcohol.
" 14	"	"	37802 A. & C. Grocery.....	"	0	90	Nat. Drug Co., Vancouver.	'Sovereign'.....

DISTRICT OF VICTORIA—

Dec. 10	Bottled Juice.	Lime	41604 W. Speed..	3 bots.	0	75	Simon Leiser & Co., Ltd., Victoria, B.C.	'Royal' West India Lime Juice.
" 10	"	"	41605 The Saunders Grocery Co., Ltd.	"	1	20	Evans Sons, Lescher & Webb, Ltd., London, Eng.	Montserrat Lime Fruit Juice.
" 14	"	"	41606 Copas & Young.....	"	0	60	H. Moss, Victoria, B.C.	'Royal' West India Lime Juice.
" 14	"	"	41607 D. H. Ross & Co., Victoria, B.C.	"	0	75	Law, Young & Co., Montreal.	
" 14	"	"	41608 R. Erskine & Co., Victoria, B.C.	"	0	75	The West India Lime Juice Co., St. Thomas, W.I.	Finest West India Lime Juice.



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JUICE—*Concluded.*

RESULTS OF ANALYSIS.							Number of Sample.	Remarks and Opinion of the Chief Analyst.
Specific Gravity at 15°C.	Acidity per 100 cc in terms of cc N.	Per cent weight in Vol.-Acidity calculated as citric acid.	Rotation in 2 drm. tube.	Preservatives.	Reaction with alcohol (after evaporating to a Syrup.)			
1·0359	117·0	8·19	—0·3	None .. . . .	Bulky ppte..	37798	Genuine.	
1·0336	108·0	7·56	0·0	" .. . . .	" .. . . .	37799	"	
1·0236	80·5	5·63	+0·2	" .. . . .	" .. . . .	37800	Low in acidity.	
1·1392	37·5	2·72	—36·5	Salicylic acid present.	Slight ppte.	37801	Rotation after inversion —35·0. Contains considerable sugar. Sold as a cordial.	
1·0350	112·0	7·84	+0·9	None .. . . .	Bulky ppte..	37802	Abnormal rotation.	

## D. O'SULLIVAN, INSPECTOR.

1·0300	100·0	7·00	+1·2	None .. . . .	Bulky ppte..	41604	Rotation abnormal.	
1·0345	111·0	7·77	—0·3	" .. . . .	" .. . . .	41605	Genuine.	
1·0288	96·5	6·75	+1·0	" .. . . .	" .. . . .	41606	Rotation abnormal.	
1·0344	114·0	7·98	0·0	" .. . . .	" .. . . .	41607	Genuine.	
1·0201	68·0	4·76	+0·5	Salicylic acid trace.	" .. . . .	41608	Low in acidity, and contains a trace of preservative.	



*CORRECTION.*

In Bulletin 184, p. 6, a sample of Ginger (No. 31480), sold by W. S. Brown, Charlottetown, P. E. I., and found to be adulterated, was stated by the vendor to have been furnished him by W. H. Schwartz & Sons, Halifax. The following statement, by the vendor, is now published, in justice to the firm named :—

CHARLOTTETOWN, P. E. I.,

November 11, 1909.

Messrs. W. H. SCHWARTZ & SONS,

Halifax, N. S.

DEAR SIRs :—This is to certify that after thoroughly considering the matter as to whose Ginger I gave to Mr. Theo. Moore, the Inspector in Charlottetown, I am unable to prove that it was yours, having bought ginger from a wholesaler in Charlottetown on the 20th March, 1909.

Yours truly,

(Signed,) WALTER S. BROWN.



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## APPENDIX S.

## BULLETIN No. 198—LEMON FLAVOURING EXTRACT.

OTTAWA, February 28, 1910.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to present herewith a report upon seventy-five (75) samples, purchased throughout Canada in December last, as Lemon Flavouring Extract.

The last examination of this article was made in 1905, and is reported in Bulletin No. 114.

Lemon Extract is probably more largely used in the household than any other kindred preparation for the flavouring of pastry, &c. It is, of course, valued proportionately to its strength as a flavouring material, and to the quality of the flavour which gives it its name. No legalized standard for Lemon Extract exists in Canada; and in view of the large consumption of the article, it is of importance that it should be defined and legally recognized.

The results now placed in your hands, together with those published in Bulletin No. 114, will suffice to show the character of Lemon Extract as sold in Canada.

Both the British and the United States Pharmacopœias define a Tincture (or Spirit) of Lemon, and prescribe methods of preparation. Although it is not permissible to identify the Commercial Extract, as sold for flavouring purposes, with the pharmacopœial tinctures still, as these last are 'chiefly used to impart flavour to other medicines' (Squire's Companion, 18th Ed'n, p. 222), it seems reasonable to infer that the same methods of manufacture and the same properties possessed by the tinctures of pharmacy, which commend these last to the medical profession, should be imitated as far as possible by manufacturers of Commercial Extract.

The latest editions of both Pharmacopœias contain revised formulas for preparation of Tinctura Limonis, as shown in the following table:—

## TO MAKE 1,000 PARTS OF TINCTURE (SPIRIT) OF LEMON.

Materials from which made.	BRITISH PHARMACOPŒIA.		U.S. PHARMACOPŒIA.	
	Ed'n 1885	Ed'n 1898.	Ed'n 1890.	Ed'n 1900.
Name of preparation.	Tincture.	Tincture.	Spirit.	Tincture.
Oil of lemon . . . . .			50	
Fresh lemon peel . . . . .	125	250	50	500
Strength of alcohol employed (Vol. p.c.).....	57	90	95.1	94.9
Volume of product . . . . .	1,000	1,000	1,000	1,000



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It will be noted that lemon oil as such is no longer used in the manufacture of the tincture. The tinctures are made to contain large amounts of lemon peel extractive matter, both by using large amounts of peel, and by extracting this with strong alcohol, instead of with proof spirit, as directed in the British Pharmacopœia of 1885.

The following analytical results were obtained with tinctures made in the laboratory according to B. P. directions, as above given.

Mean result upon *Tinctura Limonis*, prepared according to B. P. directions, Ed'n 1898.

Specific gravity.....	0·8769
Rotation, 2 dm. at 20°C.....	+3°8
Equivalent Lemon Oil.....	1·2 p.c.
Alcohol (volume p. c.).....	75·08

It will be noted that the water present in fresh lemon peel, freed as much as possible from the white, inner layer, reduces the alcohol strength from 90 per cent in the original solvent, to 75 per cent in the finished tincture; and that the lemon oil in the tincture averages only 1·2 per cent. The maximum content of oil found in any tincture made here from commercial lemons, was 1·4 per cent.

As a matter of interest I furnished samples of these tinctures to several persons, to be used as flavouring material, in order that their value for such purpose might be judged by actual baking tests. The unanimous opinion was that they were of good quality, as to flavour, but much weaker than the ordinary lemon extract of commerce. It appeared to be necessary to use from two to four times the volume usually employed, in order to get satisfactory results in intensity of flavour.

The United States standard for Lemon Extract is as follows:—'Lemon Extract is the flavouring extract prepared from oil of lemon, or from lemon peel, or both, and contains not less than five (5) per cent by volume of oil of lemon.'

'A flavouring Extract is a solution in ethyl alcohol of proper strength, of the sapid and odorous principles derived from an aromatic plant, or parts of the plant, with or without its colouring matter, and conforms in name to the plant used in its preparation.'

'Oil of lemon is the volatile oil obtained by expression or alcoholic solution, from the fresh peel of the lemon (*Citrus limonum*), has an optical rotation (25 C.) of not less than +60° in a 100 mm. tube, and contains not less than four(4) per cent by weight of citral.'

It would appear from the results upon Tincture of Lemon above quoted, that an extract of lemon, to contain five per cent of lemon oil, if prepared direct from the lemon peel with 90 per cent alcohol would require the employment of  $\frac{1}{15} \times 250 = 1,042$  parts of lemon peel to prepare 1,000 parts of the finished product. This is more than twice the weight of peel prescribed by the U. S. Pharmacopœia (1900) for preparation of the tincture, and more than four times that required by the British Pharmacopœia. It is indeed doubtful whether an extract of the kind supposed, could be so prepared, because of the large amount of water present in the lemon peel. This would reduce the strength of alcohol, in the finished extract, to about 30 per cent, a strength insufficient to effect the complete extraction of the oil from lemon peel.

It is not, however, to the lemon oil as a whole, that the flavouring value of lemon extract is chiefly due, but to the citral (Geranial) that it contains. Lemon oil contains from 3 to 4 per cent of citral (Squire's Companion, 18th Ed'n, p. 723), so that an extract containing 5 per cent of the oil may contain about 0·2 per cent of citral. Citral is stated by Squire (Op. cit. p. 727) to possess about 15 times the flavouring power of lemon oil; and it is evident that citral is the really important component of Extract of Lemon, as used for flavouring purposes. The direct estimation of citral is apparently the true basis of valuation. It is unfortunate that methods applicable to the exact determination of citral in commercial extract of lemon are not available. Work is now being done with a view to the elaboration and perfecting of such methods.



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Oil of Lemon Grass (*Oleum Graminis Citrati*) contains citral. As obtained from this source citral has a flavour quite different from that of the lemon, and resembling that of verbenal. Lemon Grass citral is, nevertheless, employed as an adulterant of lemon oil (Squire's, *Op. cit.* p. 725), and is doubtless substituted for lemon citral, in the cheaper lemon extracts. The perfecting of a chemical method for direct determination of citral, would not serve to distinguish between citral from lemon and citral from lemon grass. It is, perhaps, to ensure the presence of a true lemon product, that the standard fixed by the United States requires the presence of 5 per cent of oil of lemons. Since, however, it is possible to substitute lemon grass citral in place of lemon citral, in lemon oil itself, the fact of the presence of lemon oil terpenes (which constitute over 90 per cent of lemon oil) is not a guarantee of the genuineness of the article.

It would seem that a useful assay of lemon extract involves (1) a determination of citral (2) an identification of the citral as that from lemons. Determinations of alcohol and of lemon oil are not sufficient to establish the genuineness or the value of a lemon extract for flavouring purposes. Strong alcohol is not needed to keep the citral in solution, and its employment merely adds to the cost of the article, without increasing its value to the consumer. It certainly enables a high percentage of lemon oil to be dissolved; but, as we have seen, it is not upon the terpenes of lemon oil that the flavouring value depends.

As in the case of many articles of food, which are valued chiefly for their flavour, bouquet or aroma, it must be granted that, in the present state of our knowledge, the trained palate or olfactory nerve of the expert is a surer guide than the analytical methods of the laboratory. Until we perfect a process for the determination of citral, and further devise a method of certainly distinguishing between the citral derived from lemons and that derived from lemon grass, we must depend upon the connoisseur in flavours to enable us to place, in proper order of value, the various lemon extracts of commerce. It is true that we can show (as is done in this, and previous reports) the content in alcohol, and in lemon oil; but a high strength in alcohol is only requisite to keep the oil in solution; and it is not upon the oil content that the value of the extract depends, but upon the amount of lemon citral present. This is so small that a very weak alcohol suffices to hold it in solution.

If the extract is made from fresh lemon peel, as directed by the pharmacopœias, in the preparation of tinctures, it is certainly necessary to employ strong alcohol, because the water in the peel reduces the strength of the alcohol proportionately to the amount of peel used; and we have seen that to obtain an extract of 5 per cent oil strength, we must employ an amount of peel at least equal to the weight of extract desired. But commercial extract of lemon is seldom or never made from the peel, but from the oil. Dilute alcohol is not further diluted in the operation of dissolving citral from the oil, as in the case of dissolving citral from the peel. Hence a comparatively weak alcohol, even below proof strength, is quite efficient; and while taking but small amounts of the terpenes into solution, effects a notable solution of citral, with the production of an extract which commands ready sale.

It is not even necessary that lemon oil should be employed in the manufacture of lemon flavouring extract. A very satisfactory extract can be made by the direct solution in alcohol of so-called, terpeneless oil of lemon. This is the residue from a fractional distillation of lemon oil, and contains the citral, normally belonging to the lemon oil, together with citronellal, and other components to which the flavour of lemon oil is due.

To sum up:—

1. Extract of lemon is valued for its characteristic flavour.
2. This flavour depends upon the presence of certain constituents of lemon oil.
3. The terpenes, which constitute more than 90 per cent of lemon oil, are not important from the point of view of contributing flavour to the oil.
4. It is mainly to dissolve the terpenes of lemon oil that strong alcohol is used as a solvent.
5. The citral, citronellal, and other flavour giving components of lemon oil, constitute less than 10 per cent of the oil, and may be effectively got into solution, from the oil, by weak alcohol.



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- 6. If these flavouring components are derived immediately from fresh peel, a strong alcohol must be employed, on account of the water present in the peel. The alcohol content of the finished extract will, however, be low.
- 7. A good flavouring extract can be prepared either from fresh lemon peel, from lemon oil, or from so-called terpeneless lemon oil. It is according to commercial usage to prepare it from the lemon oil, rather than from the peel.
- 8. A weak alcohol (proof strength) suffices to dissolve the flavour giving constituents from the oil; and the employment of a stronger alcohol merely adds to the cost of the extract, without corresponding improvement of quality.
- 9. The citral of lemon-grass oil is not to be confounded with that from true lemon oil. Both citrals are more or less indefinite bodies, being essentially aldehydic, but associated with aromatic substances which are lemon-like in one case and more or less verbena-like in the other. The distinction between them is not, at present, evident, to chemical methods.
- 10. Methods for the quantitative determination of citral are being studied; and it is hoped that a practicable method may be discovered, thus enabling Lemon Extract to be judged by determination of the component to which it owes its commercial importance.

Of the 75 samples covered by the present report, only 13 contain above 1 per cent of lemon oil. These are as follows, and are arranged in order of their lemon oil content :—

No.		Lemon oil.	Alcohol.
39621	Baird's.....	7·6	89·72
38608	Dr. Scott, St. John, N.B.....	7·0	88·72
39618	Nat. Drug & Chemical Co.....	5·0	82·74
39829	Gold Standard Mfg.....	4·4	80·94
43635	W. A. Georgeson Co., Calgary.....	3·6	90·32
38882	F. F. Dalley Co.....	3·6	82·64
41753	F. F. Dalley Co.....	3·2	80·40
42857	F. F. Dalley Co.....	3·0	83·16
38881	F. F. Dalley Co.....	2·8	71·48
40380	Henri Jonas Co.....	2·1	71·78
39827	Campbell Bros. & Wilson.....	1·6	56·82
41755	Seeley.....	1·5	61·96
39830	White Star Mfg. Co.....	1·0	70·70

62 samples contain less than 1 per cent of lemon oil and 60 samples contain less than 0·5 per cent lemon oil. It is quite apparent that the appreciation given to Lemon Extract by consumers is dependent upon something else than its lemon oil content.

When considerable amounts of lemon oil are in solution, the alcoholic strength is necessarily high. The absence of terpenes makes it unnecessary to employ so strong an alcohol. Among the 62 samples containing less than 1 per cent of oil, some are very high in alcohol, and apparently to no purpose.

	Samples
From 80 to 90 per cent alcohol .....	4
" 70 " 80 " .....	3
" 60 " 70 " .....	1
" 50 " 60 " .....	5
" 40 " 50 " .....	14
" 30 " 40 " .....	8
" 20 " 30 " .....	24
" 10 " 20 " .....	3
	62



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It thus appears that 49 samples, or 66 per cent of the total collection, are made with alcohol of less than proof strength; while 27 samples, or 36 per cent of the collection, contain alcohol of about half the strength of proof. Yet several of these appear to be very acceptable flavouring extracts.

I have the honor to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



BULLETIN No. 198—FLAVOURING EXTRACT OF LEMON.

Date of Collection.	Nature of Sample.	No. of Sample.	Cost.		Name and Address of Vendor.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Sp. Gr. of Sample.	RESULTS OF ANALYSIS.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
			Quantity.	Cents.					Rotation in 20° therm. tube at 20° C.	Equivalent Lemon Oil	Sp. Gr. of Oil (free distillate) (identical by Vol.)	Sp. Gr. of Oil (identical by Vol.)	Alcohol by Vol.		

DISTRICT OF NOVA SCOTIA R. J. WAUGH, INSPECTOR.

1909.															
Dec.	6 Flav. Extract of Lemon.	41751	Nat. Drug & Chem. Co., 3 bats.	20	Vendors		'Sovereign' brand	0.9175	0.9	0.30	91.99	57.00		41751	
"	"	41752	J. Frank Crowe & Co., 3 "	30	Imperial Extract Co., Toronto.			0.9080	0.1	0.10	90.83	27.62		41752	
"	"	41753	R. B. Seaton & Co., 3 "	50	F. F. Dalley Co., Hamilton.			0.8494	10.5	3.20	86.25	80.40		41753	
"	"	41754	E. B. Tracey, Halifax, N.S.	30	Imperial Extract Co., Toronto.			0.9718	0.7	0.20	97.36	22.52		41754	
"	"	41755	Summer & Cassidy, Truro, N.S.	45	Seeley, Windsor, Ont.			0.9022	1.7	1.50	90.87	61.96		41755	

DISTRICT OF PRINCE EDWARD ISLAND—THEO. MOORE, INSPECTOR.

Dec.	6 Flav. Extract of Lemon.	38606	A. B. Paquet, Souris, P.E.I.	6 oz.	30	S. H. Ewing & Sons, Montreal.	'Club' soluble extract.	1.0034	+19.7	None.	0.9797	16.52		38606	Contains 5.4 p. c. cane sugar.
"	"	38607	L. McDonald, Souris, P.E.I.	6 "	24	Unknown	Strongest essence of Lemon.	0.9584	+0.6	0.20	96.12	33.60		38607	
"	"	38608	A. Currie & Co., Souris, P.E.I.	6 "	75	Dr. Scott, St. John, N.B.	Guaranteed from all adulterations.	0.8261	+22.6	7.00	83.81	88.72		38608	
"	"	38609	Mathew & McLean, Souris, P.E.I.	6 "	48	Tropical Extract Co., Montreal.	Imperial flavouring extract.	0.9504	+0.7	0.20	95.23	39.92		38609	
"	"	38610	Geo. Rackham, Charlottetown, P.E.I.	6 "	54	Carvell Bros., Charlottetown.	McLaren's vinible extract true lemon	0.9405	+0.6	0.20	94.17	46.20		38610	



DISTRICT OF NEW BRUNSWICK—JNO. C. FERGUSON, INSPECTOR.

Dec.	2	Flav. Extract of Lemon.	39618	Nat. Drug & Chem. Co. Ltd., St. John, N.B.	45	Vendors	Star brand.	0 8242 + 17 8	5 60 8333	90 20	39618
"	2	"	39619	Dearborn & Co., John, N.B.	75	"	Dearborn brand	0 9461 + 0 7	0 20 9474	42 58	39619
"	8	"	39620	G. E. Barbour Co. Ltd., St. John, N.B.	60	"		0 9309 + 0 6	0 20 9312	51 72	39620
"	17	"	39621	The Baird Co. Ltd., Woodstock, N.B.	25	"	Labelled Lemon Bairds super Extra, fruit flavouring ex- tract.	0 8233 + 23 4	7 60 8349	89 72	39621
1910. Jan.	6	"	39622	Geo. Stables, Newcastle, N.B.	30	White Cross Mfg. Co., Toronto.	Pure Lemon, White Cross Mfg. Co.	0 9749 + 2 2	0 70 9772	19 08	39622

DISTRICT OF QUEBEC E. BELAND, INSPECTOR.

Dec.	1	Flav. Extract of Lemon.	36687	Ludger Mignault, Anselme.	30	Dr. Ed. Morin, Quebec.		0 9856 + 0 6	0 20 9864	10 32	36687
"	1	"	36688	Alphonse Daimas, Anselme.	30	Whitehead & Turner, Quebec.		0 9624 0 6	0 20 9643	31 16	36688
"	1	"	36689	J. M. Guillet, Anselme.	54	W. Brunet & Cie, Quebec		0 8738 + 0 8	0 30 8743	76 08	36689
"	1	"	36690	Mad. Veave F. X. Guay, St. Anselme.	45	Whitehead & Turner, Quebec.		0 9722 + 0 5	0 10 9728	23 22	36690
"	1	"	36691	Charles Audet, Anselme.	30	J. B. Renaud & Cie, Quebec.		0 9728 + 0 4	0 10 9736	22 52	36691

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

Dec.	6	Flav. Extract of Lemon.	38879	N. N. Boucher & Cie, La Baie	50	H. Jonas & Cie, Montreal	Triple	0 8770 + 0 8	0 20 8794	74 16	38879
"	7	"	38880	P. Blain, Vercheres.	30	Hudon & Orsali, Mon- treal.	Signal	0 9746 + 0 4	0 10 9760	20 24	38880
"	9	"	38881	J. A. Minard, Farnham	30	The F. F. Dalley Co., Ltd., Hamilton.		0 8737 + 8 8	2 80 8863	71 48	38881
"	20	"	38882	F. W. Gibson, Danville.	60	"		0 8515 + 11 4	3 60 8567	82 64	38882
"	21	"	38883	A. Hamel, Magog.	25	Mathewson's Sons, Mon- treal.	M. Sons	0 9666 + 0 7	0 20 9668	28 92	38883



BULLETIN No. 198—FLAVOURING EXTRACT OF LEMON.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Sp. Gr. of Sample.	Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.				Rotation in 20° C. drum, tube at	Equivalent Lemon Oil - Vol.	Sp. Gr. of Oil (Corrected to 15° C.)	Alcohol by Vol.				

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

1909.									P. C.	P. C.
Dec.	1 Flav. Extract of Lemon.	40376 The Brodie Mfg. Co., 3 bots. Montreal.	40	Vendors	.....	0.9623 + 0.4	0.10	9647	30.80	40376
"	1 "	40377 Pelletier et frere, 173 " Chaboillez Square, Montreal.	30	.....	Our Own brand	0.9657 + 0.7	0.20	9666	29.12	40377
"	1 "	40378 James Duncan, Lachine, 3 " P.Q.	25	.....	Hercules' brand	0.9667 10.0	0.30	9675	28.36	40378
"	2 "	40379 Herron Leblanc Ltd., 575 3 " St. Paul St., Montreal.	40	Vendors	.....	0.9417 + 0.7	0.20	9424	45.74	40379
"	2 "	40380 Henri Jonas & Co., 3 " Montreal.	38	"	.....	0.8756 + 7.2	2.10	8855	71.78	40380

DISTRICT OF OTTAWA—J. A. RICEY, INSPECTOR.

Dec.	3 Flav. Extract of Lemon.	Walter Cunningham, 3 bots. Ottawa.	75	75	The F. F. Dalley Co., Ltd., Hamilton.	.....	0.8497	+ 9.0	3.00	8552	83.16	42857	
"	3 "	A. P. Johnson, Ottawa.	30	30	H. N. Bate & Sons, Ottawa. wa.	Labelled Our Soluble Extract Lemon Mfg. by I. E. Co., Toronto.	0.9688	+ 0.7	0.20	9693	26.68	42859	
"	11 "	The City Grocery, Carleton Place.	30	30	Unknown	Labelled Our Own Concentrated true fruit flavouring Extract.	0.9746	+ 0.7	0.20	9755	20.76	42861	
"	14 "	The Anderson Langstaff Co. Ltd., Kemptville.	30	30	Pure Gold Mfg. Co., Toronto.	'Eagle' brand quintessence.	0.9685	+ 0.4	0.10	9693	26.68	42863	



"	17	"	"	42865	Chester Casselman, 3 " " 30	The J. M. Lowes Co., Ltd., Toronto.	Labelled Our Own Concentrated pure fruit flav. ext. Lemon.	0 1 0 9753	20 94	42865
					Chesterville.					

DISTRICT OF KINGSTON—JAS. HOGAN, INSPECTOR.

Nov.	29	Flav. Extract of Lemon.	42777	A. P. Chown, Kingston.. 6 oz.. 35	Vendor.....	0 9152	+	0 5	0 1 0 9172	58 27	42777
"	29	"	42778	C. S. Prouse, Kingston.. 6 " " 30	"	0 8604	+	0 8	0 2 0 8636	80 02	42778
Dec.	1	"	42779	R. Templeton, Belleville. 6 " " 35	"	0 9090	+	0 4	0 1 0 9103	61 30	42779
"	1	"	42780	W. H. A. Semple, Cobourg. 6 " " 40	"	0 8749	+	0 7	0 2 0 8781	74 68	42780
"	1	"	42781	H. Mitchell, Port Hope.. 6 " " 50	"	0 8383	+	1 0	0 3 0 8426	87 38	42781

DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.

Dec.	17	Flav. Extract of Lemon.	41437	MacLaren's, Ltd., Hamil- 3 bots. 17	Vendors.....	0 9763	+	0 4	0 1 0 9764	19 90	41437
				ton.							
"	17	"	41438	The F. F. Dalley Co., 3 " " 23	"	0 9453	+	0 5	0 1 0 9460	43 58	41438
				Ltd., Hamilton.							
"	18	"	41439	J. L. Hewson, Oakville.. 3 " " 30	Pure Gold Mfg. Co., Ltd., Toronto.	0 9688	+	0 7	0 2 0 9689	27 04	41439
"	22	"	41440	White Swan Spices and 3 " " 38	Vendors.....	0 9446	+	0 7	0 2 0 9463	43 38	41440
				Cereals, Ltd., Toronto.							
"	23	"	41446	J. Wrigley, Toronto ... 3 " " 30	Imperial Extract Co., Toronto.	0 9678	+	0 7	0 2 0 9685	27 42	41446

DISTRICT OF LONDON—T. KIDD, INSPECTOR.

Dec.	6	Flav. Extract of Lemon.	30870	J. A. McCrea & Son... 3 bots. 30	H. P. Eckert & Co., Toronto.	0 9718	+	0 7	0 2 0 9717	24 44	30870
"	10	"	30885	A. E. Robertson, Stratford. 3 " " 45	Vendor.....	0 9188	+	1 2	0 4 0 9216	56 26	30885
"	10	"	30886	H. M. Myers, Stratford 3 " " 45	"	0 9080	+	0 9	0 3 0 9106	61 14	30886
"	10	"	30889	Richard Smith, Seaforth. 3 " " 30	Imperial Extract Co., Toronto.	0 9678	+	0 7	0 2 0 9679	27 98	30889
"	21	"	44710	A. Beattie & Co., St. Mary's. 3 " " 30	"	0 9672	+	0 5	0 1 0 9682	27 02	44710



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Inspector's Report. (Is not an expression of opinion).	Sp. Gr. of Sample.	RESULTS OF ANALYSIS.					No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.			Rotation in 2 dm. tube at 20° C.	Equivalent Lemon Oil	Sp. Gr. of the free distillate.	(Calculated.)	Alcohol by Vol.		

DISTRICT OF WINDSOR JNO. TALBOT, INSPECTOR.

1909.									P. C.	P. C.				
Dec.	6 Flav. Extract of Lemon.	42658	F. L. Wagner, Aylmer, Ont.	30	30	Young & Winfield, Hamilton.	ex. 0.9688	0.8	0.30	0.9391	26.86	42658		
"	"	42664	J. A. Trestrain, Tillsonburg.	3	25	McLaren's, Hamilton.	'Thistle' brand 0.9694	0.9	0.30	0.9716	24.44	42664		
"	"	42668	Potts Clark Co., Simcoe.	3	30	Eby Blain, Toronto.	.....	0.9770	0.30	0.9775	18.74	42668		
"	"	42677	Jas. Burns, Brantford.	3	25	F. F. Dailey Co., Hamilton.	.....	0.9530	0.20	0.9537	38.98	42677		
"	"	42678	Geo. J. Harp, Brantford.	3	30	Gorman Eckert Co., London.	'Jewell' 0.9650	0.6	0.20	0.9668	28.92	42678		

DISTRICT OF MANITOBA A. C. LARIVIERE, INSPECTOR.

Dec.	6 Flav. Extract of Lemon.	39826	Blue Ribbon Mfg. Co., Winnipeg.	3	50	Vendors	'Blue Ribbon' 0.9398	0.5	0.10	0.9403	46.96	39826		
"	"	39827	Campbell Bros. & Wilson, Winnipeg.	3	35	"	'Royal Shield' 0.9092	+38.9	1.60	0.8808	71.26	39827	Contains 8.54 p. c. cane sugar	
"	"	39828	The Dyson Co., Winnipeg.	3	60	"	'Red Cross' ex. 0.9463	+0.9	0.30	0.9473	42.78	39828		
"	"	39829	Gold Standard Mfg. Co., Winnipeg.	3	45	"	'Gold Standard' 0.8569	+14.1	4.40	0.8612	80.94	39829		
"	"	39830	The White Star Mfg. Co., Winnipeg.	3	45	"	'White Star' ex. 0.8558	+3.4	1.00	0.8882	70.70	39830		



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## DISTRICT OF CALGARY—R. W. FLETCHER, INSPECTOR.

Dec. 10	Flav. Extract of Lemon.	43631	L. B. Cochrane, Medicine Hat.	3 bats.	75	Gold Standard Mfg. Co., Winnipeg.	0.8575	+ 0.7	0.20.8586	81.90	43631
" 10	"	43632	H. H. Ireland, Medicine Hat.	3 "	105	McLaren's, Ltd., Hamilton.	0.9428	+ 0.8	0.30.9438	44.92	43632
" 10	"	43633	R. Dunn, Medicine Hat.	3 "	75	Gold Standard Mfg. Co., Winnipeg.	0.8517	+ 0.6	0.20.8538	83.68	43633
" 17	"	43634	Copas & Emerson, Calgary.	3 "	75	G. F. Sutton Sons Co., London, Eng.	0.9442	+ 0.5	0.10.9470	42.98	43634
" 17	"	43635	W. A. Georgeson & Co., Ltd., Calgary.	3 "	75	Vendors.....	0.8271	+ 11.4	3.60.8329	90.32	43635

## DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR.

Dec. 9	Flav. Extract of Lemon	37793	Larsen & Anne.....	3 bats.	75	Empress Mfg. Co.....	0.9552	+ 0.4	0.10.9560	37.36	37793
" 9	"	37794	C. E. Hoffard, New Westminster.	3 "	60	Sherriffs Co.....	0.9391	+ 0.4	0.10.9403	46.96	37794
" 10	"	37795	W. Hetherington, Vancouver.	3 "	75	McLaren & Co.....	0.9419	+ 0.4	0.10.9420	46.02	37795
" 13	"	37796	R. Ackerman, Vancouver.	3 "	60	Pure Fruit Extract Co.....	0.9853	+ 0.7	0.20.9856	11.10	37796
" 13	"	37797	T. Russell, Vancouver.	3 "	75	Kelly Douglas Co., Vancouver, B.C.	0.9460	+ 0.5	0.10.9463	43.38	37797

## DISTRICT OF VICTORIA D. O'SULLIVAN, INSPECTOR.

Dec. 10	Flav. Extract of Lemon.	41599	Windsor Grocery Co.....	3 bats.	75	Sherriffs, Toronto.....	0.9407	+ 0.7	0.20.9441	44.72	41599
" 10	"	41600	W. Speed.....	3 "	60	Empress Mfg. Co., Vancouver, B.C.	0.9535	+ 0.4	0.10.9551	37.96	41600
" 10	"	41601	Saunders Grocery Co., Ltd.	3 "	75	Pure Gold Mfg. Co., Toronto.	0.9378	+ 0.5	0.10.9411	46.56	41601
" 14	"	41602	R. Erskine & Co.....	3 "	75	Pioneer Coffee and Spice Mills, Victoria, B.C.	1.0149	+ 4.9	0.00.9718	24.26	41602 Contains cane sugar
" 15	"	41603	W. A. Jameson Co.	3 "	60	W. A. Jameson Coffee Co., Victoria, B.C.	0.9555	+ 0.9	0.30.9570	36.72	41603



APPENDIX T.

BULLETIN No. 199—FRIAR'S BALSAM, (COMPOUND TINCTURE OF BENZOIN.)

OTTAWA, March 8, 1910.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to submit herewith the results of analysis of 70 samples of Friar's Balsam (Tinctura Benzoini Composita), collected throughout Canada in September and October of last year.

This tincture is very largely used as a remedy in bronchitis and is official in most pharmacopœias.

The composition of the Compound Tincture of Benzoin is nearly identical for the British and the United States Pharmacopœias, as follows:—

TO MAKE 1000 PARTS.

Materials from which made.	B. P.	U. S. P.
Benzoin.....	100	100
Alb. ....	18.2	20
Storax.....	75	80
Balsam of Tolu.....	25	40
Alcohol.....	q. s.	q. s.
	1000	1000

The tests prescribed by the British Pharmacopœia are:—

- 1. Specific gravity, about 0.900.
- 2. Total solids, 17 to 18 per cent.
- 3. Absolute alcohol, about 75 p.c.

Tinctures made in the laboratory according to B. P. directions gave results as follows:—

	Days.	Days.
Time of maceration . . . . .	2	3½
Specific gravity.....	0.8981	0.8924
Total dry solids . . . . .	14.6	15.4
Alcohol (vol. p. c.) . . . . .	74.32	74.96



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The fact that different varieties of benzoin have different solubilities may to some extent account for the varying solids found in the tinctures herein reported. It will be noted that even the tinctures made in this laboratory did not yield the amount of dry solids required (17-18 p.c.), and 17 p.c. is only reached by 7 samples out of 70 examined. Solids vary from 8.6 to 19.46 per cent, five (5) samples containing less than 10 per cent.

The alcohol used is generally of proper strength; and is genuine in 69 samples. One sample (No. 1255) is made with methyl alcohol, and is therefore adulterated.

This report shows Friar's Balsam as dispensed in Canada, to be generally somewhat below the pharmacopœial standard in dissolved solids.

I beg to recommend the publication of this report as Bulletin No. 199.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst*



RESULTS OF ANALYSIS.																					
Date of Collection.		Nature of Sample.	Name and Address of Vendor.	Quantity.	Cost.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Sp. Gr. of Sample at 15 C.	Sp. Gr. of Distillate to equal Volume.	Alcohol.			Total Solids Grams per 100cc.	Density.	Alc. Gr. by Weight.	Examination for Methyl Alcohol.			No. of Sample.			
									Weight.	Volume.	Proof Spirit.				Theory.	Found.	Difference.				
DISTRICT OF NOVA SCOTIA R. J. WAUGH, INSPECTOR.																					
1909.									p. c.	p. c.	p. c.	p. c.									
Oct.	8	Friars Balsam.	41846 G. C. McDougall, 6 oz., Kentville, N.S.	90		Vendor	.....	0.8707	0.8492	79.64	85	19	149.27	11.77	0.9616	27.50	64.6	64.4	-	0.2	41846
"	8	"	41847 H. E. Wilson, Wind-6 " " sor, N.S.	60		"	.....	0.8718	0.8514	78.76	84	47	148.03	13.61	0.9596	28.81	66.8	66.5	-	0.3	41847
"	11	"	41848 A. J. Crease, Am-6 " " herst, N.S.	60		"	.....	0.8880	0.8701	70.80	77	60	136.00	17.61	0.9614	27.64	64.8	64.6	-	0.2	41848
"	11	"	41849 R. C. Fuller & Co., 6 " " Amherst, N.S.	50		Vendors	.....	0.8739	0.8531	78.08	83	91	147.05	13.34	0.9514	33.82	74.1	73.8	-	0.3	41849
"	12	"	41850 Crowe Bros., Truro, 6 " " N. S.	55		"	.....	0.8869	0.8649	73.08	77	61	139.52	14.40	0.9651	25.07	60.4	60.1	-	0.3	41850
DISTRICT OF NEW BRUNSWICK J. C. FERGUSON, INSPECTOR.																					
1909.																					
Sept.	9	Friars Balsam.	39583 The Nat. Drug and 6 oz., Chem. Co., Ltd., St. John, N.B.	60		Vendors	.....	0.8784	0.8647	73.08	79	61	139.52	12.81	0.9707	20.75	51.9	51.9	0.0		39583
"	15	"	39584 P. J. Donohoe, St. 6 " " John, N.B.	60		Vendor	.....	0.8830	0.8701	70.80	77	60	136.00	14.88	0.9745	17.67	45.8	45.9	+	0.1	39584
"	21	"	39585 R. T. Mack, Frederic-6 " " ton, N.B.	60		"	.....	0.8799	0.8556	77.04	83	04	145.52	15.29	0.9663	24.15	58.4	58.2	-	0.2	39585
Oct.	6	"	39586 Fairweather Bros. 6 " " Estate, Moncton, N.B.	60		Vendors	.....	0.8913	0.8593	75.45	81	68	143.14	16.24	0.9617	27.43	64.4	64.2	-	0.2	39586
"	11	"	39587 A. W. G. McDonald, 6 " " Campbellton, N.B.	40		Davis Lawrence Co., Montreal.	.....	0.8879	0.8701	70.80	77	60	136.00	10.06	0.9652	25.00	60.1	60.2	+	0.1	39587



DISTRICT OF QUEBEC—E. BELAND, INSPECTOR.

11	Sept. 13	Friars Balsam.	36652	Dr. J. L. L. Hamelin, Louiseville.	6 oz.	60	Lyman Sons, Montreal.	0.9065	0.8806	66.43	73.69	129.15	16.74	0.9641	25.79	61.5	61.5	0.0	36652
12	" 13	"	36653	L. A. Plante, Louiseville.	6 "	60	Nat. Drug Co., Montreal.	0.8818	0.8701	70.80	77.60	136.00	11.57	0.9706	20.83	52.0	51.6	- 0.4	36653
13	" 14	"	36654	J. A. Peltier, Trois Rivières.	6 "	60	Lyman, Ltd., Montreal.	0.8819	0.8683	71.54	78.25	137.14	11.57	0.9942	17.92	46.3	46.6	+ 0.3	36654
	" 14	"	36655	R. W. William, Trois Rivières.	6 "	45	"	0.8651	0.8445	81.56	86.77	152.06	10.28	0.9705	20.92	52.3	52.6	+ 0.3	36655
	" 14	"	36656	Pharmacie Normand, Trois Rivières.	6 "	50	Lyman Knox, Montreal.	0.8986	0.8790	67.13	74.33	130.26	16.70	0.9645	25.50	61.0	61.3	+ 0.3	36656

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

Sept. 15	Friars Balsam.	1251	P. A. Berard, Drummondville.	6 oz.	75	Unknown.	0.9092	0.8822	65.75	73.07	128.05	19.02	0.9738	18.23	47.0	47.4	+ 0.4	1251
" 16	"	1252	J. B. Leduc, Marieville.	6 "	70	Lyman Knox Co., Montreal.	0.8969	0.8806	66.43	73.69	129.15	14.61	0.9597	28.75	66.8	66.7	- 0.1	1252
" 17	"	1253	Dr. Guy, St. Jean.	"	60	Vendor.	0.8909	0.8666	72.26	78.89	138.25	17.97	0.9706	20.83	52.4	52.6	+ 0.2	1253
" 22	"	1254	Dr. Lambly, Cookshire.	6 "	75	Lyman, Ltd., Montreal.	0.8991	0.8739	69.33	76.31	133.72	18.29	0.9605	28.25	65.9	65.5	- 0.4	1254
" 23	"	1255	Magog Pharmacy, Magog.	6 "	50	Unknown.	0.8687	0.8384	83.92	88.64	155.34	12.56	0.9592	29.07	67.3	40.5	- 26.8	1255

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

Sept. 9	Friars Balsam.	40306	A. Monat, 20 St. Catherine W., Montreal.	6 oz.	40	"	0.9000	0.8806	66.43	73.69	129.15	15.53	0.9754	16.92	44.3	44.4	+ 0.1	40306
" 9	"	40307	J. T. Lyons Co., suc., 577 St. Catherine W., Montreal.	6 "	50	"	0.8730	0.8611	74.64	80.96	141.89	12.03	0.9728	19.00	48.5	48.6	+ 0.1	40307
" 9	"	40308	A. B. Scarff, 703 St. Catherine W., Montreal.	6 "	65	Lyman Knox Co., Ltd.	0.9006	0.8823	65.71	73.03	127.99	15.35	0.9757	16.69	43.9	44.1	+ 0.2	40308
" 9	"	40309	C. T. Milne, 721 St. Catherine W., Montreal.	6 "	50	"	0.9015	0.8823	65.71	73.03	127.99	15.21	0.9751	17.17	44.8	45.0	+ 0.2	40309
" 9	"	40310	O. Brault, 248 St. Antoine, Montreal.	6 "	50	"	0.8968	0.8701	70.80	77.60	136.00	14.43	0.9622	27.07	63.8	63.8	0.0	40310

\* Contains wood Alcohol—Adulterated.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	RESULTS OF ANALYSIS										No. of Sample.			
			Quantity.	Cents.		Sp. Gr. of Sample at 15° C.	Sp. Gr. of distillate to equal Vol.	Alcohol.			Total Solids grains per 100cc.	Density.	Alcohol by Weight.	Refraction.			Difference		
								Weight.	Volume.	Proof Spirit.				Theory.	Found.				

DISTRICT OF OTTAWA J. A. RICEY, INSPECTOR.

1909.																		
Sept. 22	Friars Balsam.	42831	E. H. Elvidge, Vank-leek Hill.	6 oz.	70	Lyman's, Ltd., Montreal.	0.8562	0.8398	83.38	88.22	154.60	9.40	0.9622	27.07	63.8	64.0	+ 0.2	42831
" 25	"	42832	W. S. Robertson, Perth.	6 "	60	Vendor	0.8752	0.8536	77.88	83.74	146.75	13.87	0.9584	29.60	68.2	67.8	- 0.4	42832
" 29	"	42833	John McLeister, Alexandria.	6 "	60	Lyman's, Ltd., Montreal.	0.8911	0.8593	75.45	81.68	143.14	14.05	0.9631	26.47	62.7	62.4	- 0.3	42833
Oct. 5	"	42834	R. M. Arbuthnot, Ottawa.	6 "	75	Nat. Drug Co., Ottawa.	0.8941	0.8701	70.80	77.60	136.00	13.78	0.9730	18.85	48.2	48.2	0.0	42834
" 5	"	42835	Beattie & Argue, Ottawa.	6 "	75	Vendors	0.8772	0.8556	77.04	83.04	145.52	15.96	0.9609	28.00	65.5	65.1	- 0.4	42835

DISTRICT OF KINGSTON—JAS. HOGAN, INSPECTOR.

Sept. 7	Friars Balsam.	42746	National Drug Co., Kingston.	6 oz.	50	Vendors	0.8735	0.8720	70.04	76.94	134.84	14.47	0.9661	24.31	58.8	58.6	- 0.2	42746
" 8	"	42747	D. M. Waters, Belleville.	6 "	50	Vendor	0.8830	0.8611	74.64	80.96	141.89	15.16	0.9598	28.69	66.3	66.4	+ 0.1	42747
" 8	"	42748	O. G. John's, Cobourg.	6 "	50	"	0.8772	0.8536	77.88	83.74	146.75	14.24	0.9594	28.94	66.6	66.8	+ 0.2	42748
" 8	"	42749	A. J. Gould, Cobourg.	6 "	50	"	0.8643	0.8452	81.28	86.54	151.66	11.25	0.9555	31.31	70.8	70.5	- 0.3	42749
" 9	"	42751	E. S. Payne, Peterboro.	6 "	50	"	0.8741	0.8574	76.29	82.40	144.41	11.70	0.9750	17.25	45.0	44.8	- 0.2	42751



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DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.

14	Sept. 23	Friars Balsam.	41392	Hawkins Ltd., Hamilton.	6 oz.	30	.....	0.8703 0.8492	79.64	85.19	149.27	13.05	0.9617	27.43	64.4	64.2	-	0.2	41392
15	" 23	"	41393	Littlewoods Pharmacy, Hamilton.	6 " "	50	Burroughs, Wellcome & Co., London, Eng.	0.8818 0.8773	67.83	74.97	131.38	16.59	0.9774	15.33	41.2	41.3	+	0.1	41393
16	" 24	"	41394	W. H. Cummins, Dundas.	6 " "	25	The Dom. Drug Co., Ltd., Hamilton.	0.8801 0.8756	77.04	83.04	145.52	15.81	0.9626	26.80	63.3	63.1	-	0.2	41394
17	" 25	"	41395	G. Tamblyer, Toronto.	6 " "	50	Lynlan Bros. Co., Ltd., Toronto.	0.8907 0.8666	72.26	78.89	138.25	15.39	0.9628	26.67	63.1	62.8	-	0.3	41395
18	" 27	"	41396	W. H. Worden, Toronto.	6 " "	50	The Nat. Drug & Chem. Co., Ltd., Toronto.	0.8805 0.8630	73.79	80.22	140.59	13.79	0.9564	30.78	70.0	69.9	-	0.1	41396

DISTRICT OF LONDON—T. KIDD, INSPECTOR.

Sept. 13	Friars Balsam.	30818	W. A. McIntye, St. Marys.	60	Vendor.....	0.8751	0.8593	75.45	81.68	143.14	12.98	0.9709	20.58	51.6	51.7	+	0.1	30818
" 14	"	30826	H. M. Myers, Stratford.	60	"	0.8941	0.8720	70.04	76.94	134.84	14.14	0.9728	19.00	48.5	48.2	-	0.3	30826
" 21	"	30850	Dunlop, Goderich.	60	J. Winer & Co., Hamilton.	0.9103	0.8841	64.96	72.34	126.78	16.24	0.9745	17.67	45.8	45.4	-	0.4	30850
" 22	"	30861	Walter McKibbin, Wingham.	60	Nat. Drug & Chem. Co., Hamilton.	0.9042	0.8805	66.48	73.73	129.22	16.32	0.9736	18.38	47.3	47.3	-	0.0	30861
" 27	"	30864	A. Steward, Guelph.	50	Vendor.....	0.8816	0.8556	77.04	83.04	145.52	16.19	0.9623	27.00	63.7	63.6	-	0.1	30864

DISTRICT OF WINDSOR JNO. TALBOT, INSPECTOR.

Oct. 4	Friars Balsam.	42609	C. H. Gunn & Co., Chatham.	6 oz.	50	Vendors.....	0.9003 0.8756	68.54	75.60	132.49	19.46	0.9737	18.31	47.1	46.8	-	0.3	42609
" 4	"	42610	A. J. McCall & Co., Chatham.	6 " "	60	"	0.8767 0.8611	74.64	80.96	141.89	10.52	0.9733	18.63	47.7	47.5	-	0.2	42610
" 5	"	42622	H. O. Fleming, Windsor.	6 " "	75	Vendor.....	0.8928 0.8683	71.54	78.25	137.14	16.14	0.9744	17.75	46.0	46.2	+	0.2	42622
" 7	"	42639	L. A. Willoughby, Leamington.	6 " "	75	"	0.8750 0.8536	77.88	83.74	146.75	14.23	0.9681	22.77	55.7	55.9	+	0.2	42639
" 8	"	42641	U. M. Mitton, town.	6 " "	60	"	0.8514 0.8384	83.92	88.64	155.34	8.60	0.9599	28.62	66.6	66.7	+	0.1	42641



RESULTS OF ANALYSIS.																	
Date of Collection.	Nature of Sample.	Name and Address of Vendor.	Cost.	Quantity.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Examination for Methyl Alcohol.											
						Sp. Gr. of Sample at 15° C.	Sp. Gr. of distillate to equal Volume.	Alcohol.			Total Solid Grams per 100 cc.	Density.	Alcohol by Weight.	Refraction.		No. of Sample.	
								Weight.	Volume.	Proof Spirit.				Theory.	Found.		Difference.
DISTRICT OF MANITOBA—A. C. LARIVIERE, INSPECTOR.																	
Sept. 14	Friars Balsam.	39796 Gillespie & Campbell, 6 oz., Winnipeg.	50		Unknown.	0.87940	0.8574	76.29	82.40	144.41	12.35	0.9682	22.69	55.6	55.5	0.1	39796
"	"	39797 Coleclough & Co., 6 " " Winnipeg.	30		"	0.88640	0.8683	71.54	78.25	137.14	15.12	0.9720	19.67	49.8	50.3	0.5	39797
"	"	39798 D. W. Bradshaw, 6 " " Winnipeg.	60		Vendor.	0.88750	0.8630	73.79	80.22	140.59	14.63	0.9621	27.14	63.9	63.6	0.3	39798
"	"	39799 Geo. McCullough, 6 " " Brandon.	65		Unknown.	0.88610	0.8611	74.64	80.96	141.89	16.99	0.9700	21.31	52.9	52.7	0.2	39799
"	"	39800 R. T. Hoskin, Win-6 " " nipeg.	60		Vendor.	0.87570	0.8536	77.88	83.74	146.75	13.24	0.9670	23.62	57.4	57.6	0.2	39800
DISTRICT OF CALGARY—R. W. FLETCHER, INSPECTOR.																	
Sept. 10	Friars Balsam.	35632 J. J. Johnston, Leth-6 oz., bridge.	75		H. K. Wampole & Co., Perth.	0.88770	0.8574	76.29	82.40	144.41	15.88	0.9594	28.94	67.1	66.7	0.4	35632
"	"	35633 E. M. Cawker, Med. 6 " " Hat.	75		Parke Davis Co., Walkerville.	0.88710	0.8611	74.64	80.96	141.89	15.78	0.9623	27.00	63.7	63.4	0.3	35633
"	"	35634 C. S. Pringle, Med. 6 " " Hat.	75		"	0.87660	0.8650	72.96	79.50	139.32	10.98	0.9733	18.62	47.7	47.8	0.1	35634
"	"	35635 Curry & Cope, Cal. 6 " " gary.	75		"	0.87850	0.8611	74.64	80.96	141.89	13.62	0.9758	16.62	43.7	44.0	0.3	35635
"	"	35636 W. McLean, Calgary 6 " "	75		"	0.88010	0.8701	70.80	77.60	136.00	15.65	0.9728	19.00	48.5	48.4	0.1	35636



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## DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR.

Sept. 21	Friars Balsam.	37758	Woodwards Dept. 6 oz. Store, Vancouver.	75	Vendor. . . . .	0.8770	0.8514	78.76	84	47	148.03	13.53	0.9615	27.57	64.7	64.4	-	0	3	37758
" 21	"	37759	E. S. Knowlton, Van- 6 " couver.	75	Henderson Bros., Vancouver.	0.8796	0.8536	77.88	83	74	146.75	15.68	0.9665	24.00	58.2	58.0	-	0	2	37759
" 21	"	37760	Central Drug Store, 6 " Vancouver.	75	Nat. Drug & Chem. Co.	0.8798	0.8630	73.79	80	22	140.59	14.70	0.9723	19.42	49.4	49.2	-	0	2	37760
" 21	"	37761	Woods Pharmacy, 6 " Vancouver.	75	Henderson Bros., Vancouver.	0.9024	0.8756	68.54	75	60	132.49	18.48	0.9796	13.46	37.7	37.9	+	0	2	37761
" 21	"	37762	McDuffee Bros., Van- 6 " couver.	75	Vendors . . . . .	0.8819	0.8668	72.17	78	81	138.11	15.00	0.9766	16.00	42.5	42.7	+	0	2	37762

## DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

Oct. 18	Friars Balsam.	41579	Wm. Jackson & Co., 6 oz. Victoria.	60	Lymans Ltd., Mon- treal.	0.8817	0.8701	70.80	77	60	136.00	11.42	0.9787	14.80	39.0	38.9	-	0	1	41579
" 18	"	41580	Hall & Co., Victoria. 6 "	75	Vendors . . . . .	0.8930	0.8701	70.80	77	60	136.00	18.48	0.9746	17.58	45.7	46.2	+	0	5	41580
" 18	"	41581	W. S. Terry, Vic- 6 " toria.	75	Parke Davis Co., Walkerville.	0.8893	0.8857	64.26	71	70	125.65	14.08	0.9732	18.69	47.9	48.0	+	0	1	41581
" 18	"	41582	F. J. Williams, Vic- 6 " toria.	75	Vendor. . . . .	0.8670	0.8574	76.29	82	40	144.41	9.65	0.9716	20.00	50.5	50.4	-	0	1	41582
" 18	"	41583	Geo. A. Fraser, Vic- 6 " toria.	75	Henderson Bros., Victoria, B.C.	0.8629	0.8473	80.42	85	84	150.43	9.70	0.9723	19.42	49.3	49.2	-	0	1	41583







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## APPENDIX U.

## BULLETIN No. 200—HIGHLY COLOURED CONFECTIONERY.

OTTAWA, March 9, 1910.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report upon 149 samples of candy, purchased throughout Canada, in December last. This inspection, like that reported in Bulletin No. 112 (Nov. 1905), has had special reference to the freedom of the colouring matter used in dyeing candies, from metallic impurity, and in particular from arsenic. It is gratifying to find that only a single sample gave any reaction for arsenic, and this a quite negligible trace, entirely harmless.

Inspectors were instructed to procure highly coloured confectionery, since the character of the colouring material was a main object of research. In most cases the instructions were well carried out, and these results may be interpreted to mean that harmless dyes only are employed by Canadian candy manufacturers.

Several samples were dirty and fly-specked, evidently having been exposed, in the shop. It may not be out of place to emphasize the importance of keeping candy in glass, or other close receptacles. It is not enough that a piece of muslin or gauze should be spread over the candy. This is no protection against dust, and in most cases, none against flies.

Incidentally, the nature of the sugar is reported, and it will be seen that the cheaper grades of candy, represented by this collection, contain from 50 to 70 per cent of cane sugar for the softer varieties, and from 70 to 85 per cent for the harder kinds. The other ingredients are of harmless character.

I beg to recommend the publication of this report as Bulletin No. 200.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



BULLETIN No. 200—HIGHLY COLOURED CONFECTIONERY.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Name and Address of Manufacturer or Furnisher as Given by the Vendor.	Inspector's Report (Is not an expression of opinion).	Cost.		RESULTS OF ANALYSIS.					No. of Sample.	
						Quantity.	Cents.	Moisture.	Sugar--Calculated to percentage on dry Substance.			Arsenic.		
									Polarization of half normal Sol. in 2 dm. tube.	Cane Sugar by Clerget Formula	Invert.	Direct.		
Description.														

DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.

1909.								p. c.		p. c.		p. c.		
Dec.	6	Highly Coloured Confectionery.	41741	Moirs, Ltd., Halifax, N.S.	2 lbs.	20	Vendors.	7.30	66.1	30.6	53.0	None.	Gum drops, gelatinized starch.	41741
"	6	"	41742	"	2 "	20	"	2.86	59.0	5.4	81.9	"	Peppermint flavour, mixed colour.	41742
"	6	"	41743	"	2 "	40	"	3.16	42.8	16.1	87.9	"	Clear red.	41743
"	6	"	41744	G. J. Hamilton, Halifax, N.S.	2 "	15	Vendor	3.42	41.7	14.1	83.3	"	Mixture	41744
"	7	"	41745	E. P. Charleton's, 10 & 15 cent Store, Halifax, N.S.	5, 2 "	40	Wm. Patterson Son & Co., Brantford, Ont.	2.52	64.6	19.8	66.7	"	Containing gelatinized starch.	41745
"	7	"	41746	"	2 "	20	Moirs, Ltd., Halifax, N.S.	2.48	52.6	3.8	72.8	"	Orange slices, acid drops.	41746
"	8	"	41747	Casperi Poteri, Halifax, N.S.	2 "	20	Vendor	3.10	44.0	15.2	88.4	"	Wintergreen flavour, pink stripes	41747
"	13	"	41748	Beggs Bros., Kentville, N.S.	2 "	20	E. S. Perrin & Co., London, Ont.	3.86	63.2	14.9	72.1	"	Stick candy, mixed.	41748
"	14	"	41749	Porter Bros., Wolfville, N.S.	2 "	20	Laing Mfg. Co., Montreal, P.Q.	4.10	65.9	23.0	64.0	"	Mixture	41749
"	15	"	41750	S. Thomson, Dartmouth, N.S.	2 "	25	Moirs, Ltd., Halifax, N.S.	3.08	45.1	11.3	84.2	"	"	41750



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## DISTRICT OF PRINCE EDWARD ISLAND—THEO. MOORE, INSPECTOR.

Dec.	6	Highly Coloured Confectionery.	38616	Sterns Bros., Souris	2 lbs.	20	Moirs, Ltd., Halifax, N.S.	1 80	+ 59 4	+ 11 5	71 5	None	Mixture	38616
"	7	"	38617	A. J. McDonald, Souris.	2 "	20	G. J. Hamilton, Pictou, N.S.	3 36	+ 57 7	+ 8 2	73 9	"	"	38617
"	7	"	38618	Mathew & McLean, Souris.	2 "	20	Lang Mfg. Co., Montreal.	2 46	+ 59 7	+ 17 1	63 6	"	"	38618
"	8	"	38619	T. G. Holman, Charlottetown.	2 "	20	White Candie Co., St. John, N.B.	3 22	+ 55 0	- 0 3	82 5	"	"	38619
"	8	"	38620	J. A. Hynes, Kensington.	2 "	24	Lang Mfg. Co., Montreal.	3 88	+ 64 0	+ 22 3	62 2	"	"	38620
"	9	"	38621	D. McKenzie.	2 "	20	G. J. Hamilton, Pictou, N.S.	2 72	+ 55 1	- 0 2	82 5	"	"	38621
"	10	"	38622	T. W. Strong, Summerside.	2 "	20	Unknown.	4 16	+ 64 9	+ 22 4	63 4	"	"	38622
"	10	"	38623	Waugh & Steeves, Summerside.	2 "	20	The White Candie Co., St. John, N.B.	2 82	+ 53 8	- 3 2	85 1	"	"	38623
"	14	"	38624	Coffin & Co., Charlottetown.	2 "	20	E. S. Perrin & Co., London, Ont.	3 48	+ 63 7	+ 14 9	72 8	"	"	38624
"	14	"	38625	Mrs. W. F. Carter, Charlottetown.	2 "	24	Mrs. W. F. Carter, Charlottetown.	2 82	+ 53 0	- 3 6	84 5	"	Mostly caramel colour.	38625

## DISTRICT OF NEW BRUNSWICK—JNO. FERGUSON, INSPECTOR.

Dec.	7	Highly Coloured Confectionery.	39628	A. J. Russell, St. John, N.B.	20	Vendor	Hard boiled mixture.	3.22	+ 57.1	+ 3.8	79.5	None.	Mixture	39628
"	7	"	39629	White Candy Co., Ltd., St. John, N.B.	20	Vendors	Royal mixture....	2.92	+ 51.5	2.5	80.6	"	"	39629
"	7	"	39630	Barkers, Ltd., St. John, N.B.	20	"	High boiled mixed confectionery.	3.22	+ 57.0	+ 4.7	78.0	"	"	39630
"	8	"	39631	The Phillips & White Co., Ltd., St. John, N.B.	20	"	.....	2.08	+ 41.9	17.0	85.9	"	"	39631
"	14	"	39632	Geo. F. Wilkes, Fredericton, N.B.	20	Ganong Bros., St. Stephen, N.B.	Regal mixture ....	3.04	+ 59.6	+ 6.2	79.7	"	Stick candy, mixed colours.	39632
"	15	"	39633	Ganong Bros., St. Stephen, N.B.	25	Vendors	Mixed candy.....	2.92	+ 59.3	+ 6.4	79.0	"	Mixture	39633
"	20	"	39634	Weaver & Co., Perth, N.B.	20	Ganong Bros., St. Stephen, N.B.	Merchants' hard boiled mixture.	1.54	+ 59.3	+ 8.2	76.3	"	"	39634
1910.														
Jan.	5	"	39635	Barkers, Ltd., Moncton, N.B.	20	Lang Mfg. Co., Montreal.	Cheap mixed candy would not guarantee purity.	4.02	+ 63.6	+ 21.7	62.7	"	" contains starch.	39635
"	6	"	39636	George Stables, New castle, N.B.	20	Ganong Bros., St. Stephen, N.B.	Merchants mixture	2.48	+ 60.9	+ 8.2	78.7	"	Mixture	39636



BULLETIN No. 200 HIGHLY COLOURED CONFECTIONERY.

1 GEORGE V., A. 1911

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Quantity.	Cost.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.					No. of Sample.															
								Moisture.	Direct.	Invert.	Cane Sugar by Clerget Formula	Arsenic.																
														Sugar Calculated to percentage on dry Substance.														
														Polarization of half normal Sol. in 2 dm. tube.														
Description.																												

DISTRICT OF NEW BRUNSWICK—JNO. FERGUSON, INSPECTOR—Concluded.

1910.	Jan.	S	Highly Coloured Confectionery.	39637	Moore's Bros., Campbellton, N.B.	2	20	White Candy Co., Ltd., St. John, N.B.	Royal mixture....	p. c.	3.26	+54.2	- 1.6	83.3	None.	Mixture.....	39637
	"	S	"	39638	Geo Vermette, Campbellton, N.B.	2	20	"	"	3.02	+54.9	2.3	85.3	"	"	"	39638

DISTRICT OF QUEBEC—E. BELAND, INSPECTOR.

1909.	Dec.	6	Highly Coloured Confectionery.	36501	J. L. F. Chabot, St. Germaine.	2	20	Jos. Cote, Quebec.	.....	3.78	+60.8	+13.7	70.3	None.	Mixture.....	36501
	"	6	"	36502	Jos. Chabot, St. time.	2	20	—, Scott, Junction Station.	.....	3.42	+53.6	+ 1.7	77.5	"	"	36502
	"	9	"	36503	Phileas Cloutier, Odillon.	2	20	Unknown.....	.....	3.64	+59.5	+11.0	72.4	"	"	36503
	"	13	"	36504	F. Bleaudoin, Henedine.	2	20	A. B. Dupuis, Quebec.	.....	3.14	+53.9	+ 0.9	79.1	"	"	36504
	"	13	"	36505	J. B. Cadrin, edine.	2	20	Comp. Langevin, St. Hyacinthe.	.....	3.86	+59.8	+11.5	72.1	"	"	36505
	"	13	"	36506	"	2	50	Royal Biscuit Co., St. Anne Perade	.....	3.62	+55.4	+ 3.2	77.9	"	Mostly creams; red and yellow.	36506
	"	2	"	36697	Eugene Royer, Claire.	2	20	Charles Audet, St. Anselme.	.....	3.96	+50.3	4.8	82.0	"	Mixture.....	36697
	"	3	"	36698	Joseph Roy, St. achie.	2	20	A. B. Dupuis, St. Malochie.	.....	2.84	+51.7	4.3	83.6	"	"	36698



"	4	"	36699	Victor Blanchet, Standon Dorchester	2 " "	20	The Montreal Biscuit, Montreal.	.....	3 32	+55 9	+ 2 7	79 4	"	.....	36699
"	4	"	36700	Venerant Allaire, St. Leon de Standon.	2 " "	16	Charles Audet, St. Anselme.	.....	3 40	+59 1	+10 6	72 4	"	..	36700

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

Dec.	6	Highly Coloured Confectionery.	38889	R. Roberge, Sorel.	2 lbs.	20	L. Martineau & Cie Ltd., Montreal.	Framboises.	3 22	+54 2	- 0 3	81 3	None.	Acid drops, raspberry.	38889
"	6	"	38890	L. Z. Drouin, La Baie	2 " "	24	"	Wintergreen lozenges.	1 04	+52 1	- 7 4	88 8	"	Pink tablets, contain starch.	38890
"	7	"	38891	Andrew Gnanontsos, Sorel.	2 " "	40	The McCormick Mfg. Co. Montreal.	Jujubes rouges.	8 08	+64 3	+22 8	61 9	"	Gum drops.	38891
"	9	"	38892	L. Z. Dupont, Farnham.	2 " "	50	Actna Biscuit Co., Montreal.	Wintergreen berries.	2 30	+52 3	- 4 5	84 8	"	Wintergreen berries, red.	38892
"	10	"	38893	Boulais freres, St. Jean.	2 " "	24	Vendors.	Red sticks.	3 58	+68 0	+30 6	55 8	"	Red sticks.	38893
"	10	"	38894	Pappasons Restau- rant, St. Jean.	2 " "	20	Vendor.	Yellow lemon.	5 90	+53 7	+ 0 3	79 7	"	Cream, yellow.	38894
"	20	"	38895	J. Houston, Danville	2 " "	80	Christie, Brown & Co., Montreal.	Red berries.	1 16	+54 7	2 7	85 7	"	Wintergreen berries, red.	38895
"	21	"	38896	M. E. Woodard, Sherbrooke.	2 " "	40	Vendor	Peaches	1 32	+37 7	-15 7	79 7	"	Acid drops, strawberry.	38896
"	21	"	38897	A. F. Shasha, Sherbrooke.	2 " "	40	Rowell & Son, Montreal.	Lemon drops.	1 84	+54 9	+20 2	51 8	"	Acid drops, lemon.	38897
"	23	"	38898	J. B. Daignault & Cie, St. Hyacinthe.	2 " "	20	Montreal Biscuit Co., Montreal.	Framboises.	0 92	+61 8	+18 6	64 5	"	" strawberry.	38898

DISTRICT OF MONTREAL J. J. COSTIGAN, INSPECTOR.

Nov.	29	Highly Coloured Confectionery.	40392	Ideal Confectionery Co., Ltd., Montreal.	2 lbs.	18	Vendors.	Surrette drops.	1 08	+3 5	- 15 3	78 8	None.	Acid drops, lemon yellow.	40392
"	29	"	40393	"	2 " "	18	"	Strawberry drops.	0 72	+64 5	+25 5	58 2	"	Acid drops, strawberry, red.	40393
"	29	"	40394	L. Martineau Cie, Ltd., Montreal.	2 " "	.....	"	Clear mixture.	1 54	+57 5	+ 9 4	71 8	"	Acid drops, mixed colours.	40394
Dec.	10	"	40395	Leduc et frere, Valleyfield.	2 " "	40	Star Biscuit Co., Valleyfield.	Strawberry drops.	3 10	+39 7	15 5	82 4	"	Acid drops, raspberry, red.	40395
"	16	"	40396	B. Beaubien, St. Jerome.	2 " "	20	Viau et frere, Montreal.	"	1 80	+61 5	+22 7	57 9	"	Acid drops, strawberry, red.	40396
"	16	"	40397	P. Simard, St. Jerome.	2 " "	20	"	Strawberry marbles	1 76	+63 1	+21 4	62 2	"	Balls, pink stripes	40397
"	22	"	40398	Sperdakos Bros., Notre Dame, W., Montreal.	543 2 " "	20	"	Creams	4 24	+52 8	7 0	89 3	"	Cream, pink.	40398



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.	RESULTS OF ANALYSIS.										No. of Sample.
					Quantity.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).	Moisture.		Sugar—Calculated to percentage on dry Substance.		Arsenic.	Description.		
								Direct.	Invert.	Polarization of half normal Sol. in 2 dm. tube.	(Cane Sugar by Clerget Formula)				

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR—Concluded.															
1908.															
Nov. 22	Highly Coloured Confectionery.	40399	Beauvais & Lalonde, 482 St. James St., Montreal.	30	2 "	Perrins.	Orange slice	7.78	68.7	49.5	42.1	None.	Orange slices, gelatinized starch	40399	
" 23	"	40400	J. A. Desaulniers, 1135 St. James St., Montreal.	20	2 "		Strawberry drops.	1.26	40.5	0.3	60.0	"	Acid drops, strawberry, red.	40400	
" 23	"	40401	"	20	2 "		Wintergreens.	0.90	51.4	7.2	87.5	"	Pink tablets, contain starch.	40401	

DISTRICT OF OTTAWA—J. A. RICEY, INSPECTOR.															
Nov. 24	Highly Coloured Confectionery.	42871	Bunnell Bros., Ottawa.	20	2 lbs.	Vendors.		2.90	41.2	17.1	87.0	None	Sticks, coloured.	42871	
" 24	"	42872	The McCormick Mfg. Co., Ltd., Ottawa.	14	2 "	"		3.26	62.1	14.3	71.3	"	Mixture.	42872	
" 24	"	42873	D. S. Perrin & Co., Ltd., Ottawa.	30	2 "	"		1.14	57.6	0.8	84.8	"	Conversational lozenges, colours	42873	
" 24	"	42874	Mooney Biscuit & Candy Co., Ltd., Ottawa.	15	2 "	"		2.98	50.8	0.6	74.9	"	Mixture.	42874	
Dec. 4	"	42875	Robertson Bros. Ltd., Ottawa.	17	2 "	"		3.28	62.6	14.5	71.8	"	"	42875	



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"	10	42876	Geo. Trudel, 181 Rideau St., Ottawa.	20	Vendor	3.08	+ 34.5	- 16.1	75.5	"	Sticks, red stripes	42876
"	11	42877	R. E. Keays Carleton Place.	10	H. S. McNeill, Toronto.					"	Only a few coloured pieces.	42877
"	14	42878	W. T. Cleland, 2 lbs. Kemptville.	20	Abbott Grant & Co., Brockville.	3.34	+ 42.2	- 15.5	86.0	"	Mixture.....	42878
"	16	42879	J. Brinkman, Smith's Falls.	25	Unknown.....	1.26	+ 53.1	- 6.2	88.5	"	Creams, mixed colours.	42879
"	17	42880	Fulton Bros., Chester-ville.	20	Ganong Bros., St. John, N.B.	2.88	+ 61.3	- 8.4	79.0	"	Mixture.....	42880

DISTRICT OF KINGSTON—JAS. HOGAN, INSPECTOR.

Nov.	29	Highly Coloured Confectionery.	42787 H. T. Prince, Kingston.	50	Robertson Bros. Toronto.	1.50	+ 51.4	- 13.6	97.0	None	Conversational lozenges, colours.	42787
"	29	"	42788 G. Masoud, Kingston.	65	"					"	Mixture, large amt. licorice.	42788
"	29	"	42789 T. Sakalls, Kingston.	30	Vendor					"	Only a few coloured pieces.	42789
"	29	"	42790 Skandalis & Doulfas, Kingston.	40	Martineau, Montreal.	4.62	+ 57.4	- 2.8	81.5	"	Mixture.....	42790
"	30	"	42791 W. J. Crothers, Kingston.	15	Vendor	3.60	+ 62.1	- 12.0	74.8	"	"	42791
"	30	"	42792 W. H. Pritchard, Kingston.	65	"	1.52	+ 54.1	- 3.1	85.4	"	Wintergreen berries, red.	42792
Dec.	1	"	42793 J. Wallace, Belleville.	40	Robertson Bros. Toronto.	5.44	+ 55.5	- 1.5	85.1	"	Creams, mixed colours.	42793
"	1	"	42794 A. Perks, Cobourg.	60	Nasmith, Toronto.	5.66	+ 39.6	- 1.4	57.0	"	Contain chopped nuts, &c.	42794
"	1	"	42795 T. J. McTaggart, Port Hope.	20	Unknown....	3.80	+ 59.9	- 11.4	72.4	"	Mixture.....	42795
"	2	"	42796 T. H. Hopper, Peterboro.	40	Vendor					"	Only a few coloured pieces.	42796

DISTRICT OF TORONTO H. J. DAGGER, INSPECTOR.

Dec.	1	Highly Coloured Confectionery.	41421 C. Georgas, Collingwood.	20	Vendor	1.78	+ 64.8	- 22.7	62.8	None		41421
"	3	"	41422 A. J. Stewart, Owen Sound.	60	"	0.88	+ 47.9	- 16.5	98.3	"		41422
"	6	"	41423 Peter Christopher, Hamilton.	20	"	3.34	+ 59.6	- 7.8	77.3	"		41423
"	7	"	41424 McDowell Bros., Dunville.	20	D. S. Perrin, London.	3.80	+ 63.4	- 14.8	72.5	"	Mixture.....	41424
"	16	"	41425 F. A. Wilson, Catharines.	20	Laing Bros., Hamilton.	2.80	+ 43.9	- 16.2	89.7	"	Sticks, red....	41425
"	16	"	41426 J. D. Wright, Catharines.	20	Unknown.....	2.78	+ 43.2	- 14.8	86.6	"	Mixture.....	41426



BULLETIN No. 200—HIGHLY COLOURED CONFECTIONERY.

1 GEORGE V., A. 1911

Date of Collection.	Name of Sample.	Name and Address of Vendor.	Quantity.	Cost.	RESULTS OF ANALYSIS.										Description.	No. of Sample.
					Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report (Is not an expression of opinion).	Sugar—Calculated to percentage on dry Substance.			Polarization of half normal Sol. in 2 dm. tube.	(Cane Sugar by Clerget Formula)	Arsenic.				
							Moisture.	Direct.	Invert.							
													p. c.	p. c.		
DISTRICT OF TORONTO—H. J. DAGGER, INSPECTOR.																
1909.																
Dec. 17	Highly Coloured Confectionery.	41427 H. Grierson, Hamilton.	2 "	28	Vendor.....	.....	2.62	+48.3	-6.3	81.5	None			Creams, pink and yellow.	41427	
" 22	"	41428 Robertson Bros., Ltd., Toronto.	2 "	20	Vendors.....	.....	9.20	+57.5	+1.2	83.9	"			Creams, pink....	41428	
" 22	"	41429 Paris Candy Works, Toronto Junction.	2 "	20	"	.....	3.28	+56.7	+1.6	82.2	"			Mixture.....	41429	
" 23	"	41430 Boston Candy Store, Toronto.	2 "	20	Robertson Bros., Toronto.	.....	1.20	+62.7	-13.7	73.3	"			"	41430	
DISTRICT OF LONDON—T. KIDD, INSPECTOR.																
Dec. 11	Highly Coloured Confectionery.	30892 T. S. Blows, Seaforth	1 lb	20	McLaughlin's, Owen Sound.	.....	1.18	+57.1	0.0	85.2	None			Conversational lozenges colours	30892	
" 11	"	30893 Mrs. Jas. Gillespie, Seaforth.	1 "	20	Mooney Candy Co., Stratford.	.....	0.60	+53.0	8.7	92.1	"			"	30893	
" 13	"	30894 J. J. Edwards, Seaforth.	1 "	15	Bean & Westley, Woodstock.	.....	2.72	+60.1	+8.3	77.3	"			Sticks, red stripes.	30894	
" 13	"	30896 H. T. Edwards, Seaforth.	1 "	15	Mr. Jameson, Gault.	.....	1.34	+56.5	-13.9	63.6	"			Mixture.....	30896	
" 16	"	44702 T. J. Molynaux, Dublin.	1 "	10	Bean & Westlake, Woodstock.	.....	3.16	+60.1	-9.1	76.1	"			"	44702	
" 18	"	44707 William Haight, Guelph.	1 "	20	Robertson Bros., Toronto.	.....	6.58	+56.0	2.9	85.9	"			Creams, pink and yellow.	44707	
" 18	"	44708 Yates & Thomas, Guelph.	1 "	20	Vendors.....	.....	2.86	+57.7	+3.6	80.7	"			Sticks, red stripes.	44708	
" 21	"	44711 Pickard & Phoenix, St. Mary's.	1 "	15	McClunck Co., London, Ont.	.....	5.04	+58.9	+9.5	73.7	"			Gum drops.....	44711	



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1910.	44713	R. A. Climie, Lis- towell.	1 "	10	"	3 26	63 7	15 1	72 6	"	Mixture.....	44713
"	44714	Joseph Respee, Lis- towell.	1 "	10	Mooney Mfg. Co. Stratford.	3 38	52 5	+ 0 6	77 5	"	" .....	44714
"	44715	J. S. Gee, Listowel	1 "	15	Lumsden Bros., Hamilton.	4 70	63 0	+ 11 8	76 4	"	" .....	44715

DISTRICT OF WINDSOR—JOHN TALBOT, INSPECTOR.

1909.	42654	McTavishes Bakery, Aylmer.	2 lbs.	20	Mooney, Stratford	3 18	+ 60 0	+ 16 3	65 2	None.	Mixture .....	42654
"	42662	R. M. Teall, Tillson- burg.	2 "	20	Mooney Biscuit & Candy Co. Strat- ford.	0 96	+ 52 8	+ 7 5	67 6	"	Sticks — red and yellow.	42662
"	42671	O. R. Hanselman, Simcoe.	2 "	40	Weston's, Toronto	4 34	+ 64 6	+ 19 0	68 0	"	Small creams— pink and yellow	42671
"	42674	G. O. Werrett, Sim- coe.	2 "	40	D. S. Perrin Co., London.	1 42	+ 58 1	+ 1 0	85 2	"	Conversational lozenges colours	42674
"	42675	Chas. F. Misner, Sim- coe.	2 "	20	McCormick Mfg. Co., London.	3 10	+ 61 9	+ 12 7	73 4	"	Mixture.....	42675
"	42680	A. H. Tremains, Brantford.	2 "	30	Vendor.....	2 96	+ 57 5	+ 4 7	78 8	"	Sticks, red. . .	42680
"	42695	D. S. Perrin & Co., London.	2 "	30	Vendors .....	3 78	+ 60 3	+ 11 0	73 6	"	Mixture.....	42695

DISTRICT OF MANITOBA—A. C. LARIVIERE, INSPECTOR.

Dec.	39861	Foley Bros. & Larsen, Winnipeg.	2 lbs.	...	Vendors.....	3 78	+ 63 8	+ 16 0	71 3	None.	Mixture.....	39861
"	39862	Paulin Chambers Co., Winnipeg.	2 "	...	" .....	3 18	+ 56 0	+ 4 0	77 6	"	" .....	39862
"	39863	Julius Bros., Winni- peg.	2 "	30	" .....	3 90	+ 62 6	+ 12 5	74 8	"	Stick candy, many colours.	39863
"	39864	The W. J. Boyd Co., Ltd., Winnipeg.	2 "	...	" .....	2 46	+ 54 3	1 9	83 9	"	Mixture.....	39864
"	39865	G. Castran, Winni- peg.	2 "	30	" .....	7 12	+ 57 9	+ 2 9	82 1	"	Creams, pink....	39865
"	39866	A. Binder, Winnipeg	2 "	25	Telfer Bros., Win- nipeg.	3 22	+ 60 0	+ 9 7	75 1	"	Mixture .....	39866
"	39867	W. L. Walserman, Winnipeg.	2 "	30	Thos. H. Lock & Co., Winnipeg.	3 10	+ 57 4	+ 5 3	77 7	"	" .....	39867
"	39868	Max Zissman, Winni- peg.	2 "	40	McCormick, Lon- don, Ont.	3 02	+ 61 1	+ 10 6	75 4	"	" .....	39868
"	39869	G. Venier, Winnipeg	2 "	30	Unknown.....	3 06	+ 53 5	2 6	83 7	"	" .....	39869
"	39870	B. Frank, Winnipeg	2 "	25	The Paulin Cham- bers Co., Winni- peg.	3 22	+ 56 9	5 3	77 0	"	" .....	39870



BULLETIN No. 200—HIGHLY COLOURED CONFECTIONERY.

RESULTS OF ANALYSIS.													
Date of Collection.	Nature of Sample.	Name and Address of Vendor.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report (Is not an expression of opinion).	Sugar—Calculated to percentage on dry Substance.					Description.	No. of Sample.		
					Quantity.	Cost.	Moisture.	Polarization of half normal Sol. in 2 dm. tube.				Invert.	
								Direct.	Archie.				
													(Cane Sugar by Clerget Formula)
DISTRICT OF CALGARY—R. W. FLETCHER, INSPECTOR.													
1909.						p. c.				p. c.			
Dec. 10	Highly Coloured Confectionery.	43641	D. Milne Co., Ltd., Medicine Hat.	2 lbs.	40	Robertson Bros., Toronto.	3.66	+62.5	+13.8	72.7	None	Mixture.	43641
" 10	"	43642	L. B. Cochrane, Medicine Hat.	2 "	40	"	1.80	+62.9	+19.3	65.1	*Very slight trace.	"	43642
" 10	"	43643	H. W. Ireland Co., Medicine Hat.	2 "	30	McCormick Mfg. Co., London, Ont.	2.34	+60.0	+11.2	72.7	None	"	43643
" 10	"	43644	R. Dunn, Medicine Hat.	2 "	30	"	2.98	+59.7	+10.5	73.4	"	"	43644
" 11	"	43645	H. Morrow, Medicine Hat.	2 "	40	Georgeson Co., Ltd., Calgary.	3.48	+64.4	+19.1	75.4	"	"	43645
" 16	"	43646	S. G. Freeze, Calgary.	2 "	25	D. S. Perrin & Co., London, Ont.	2.76	+60.1	+8.6	76.7	"	"	43646
" 16	"	43647	Peter Mores, Calgary.	2 "	30	Vendor	4.06	+61.0	+12.1	73.0	"	Creans, pink and yellow.	43647
" 16	"	43648	J. T. Macdonald, Calgary.	2 "	25	Mooney Biscuit & Candy Co., St at ford.	4.07	+58.9	+9.7	73.4	"	Mixture	43648
" 30	"	43649	Hudson's Bay Co., Lethbridge.	2 "	30	"	3.84	+63.6	+19.5	65.9	"	"	43649
" 30	"	43650	Bentley Co., bridge.	2 "	30	"	3.26	+56.8	+9.1	71.3	"	"	43650

\* Trace of arsenic ; amount harmless.



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## DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR.

Dec. 15	Highly Coloured Confectionery.	37803	S. Marcus, Vancouver	2 lbs.	50	Robertson & Co.	0.88 + 53.0	9.5	93.2	None.	Conversational, lozengers, colours	37803
" 15	"	37804	Eagle Cigar Store, Vancouver.	2 " "	25	Ramsay Bros.	3.52 + 57.1	3.4	80.3	"	Mixture.	37804
" 15	"	37805	Lewis & Tingerhurst, Vancouver.	2 " "	30	M. R. Smith & Co.	2.30 + 54.5	3.4	86.3	"	"	37805
" 15	"	37806	Athens Candy Co., Vancouver.	2 " "	50	Ganong Bros.	3.78 + 61.8	9.8	77.5	"	"	37806
" 15	"	37807	Mrs. O'Brien, Vancouver.	2 " "	40	Foley, Lock & Lar- sen.	3.58 + 61.4	10.4	76.1	"	"	37807
" 15	"	37808	J. A. Dickie, Vancouver.	2 " "	50	Roberts & Co.	0.98 + 51.5	8.4	89.4	"	" contain starch.	37808
" 17	"	37809	Olympia Candy Co., Vancouver.	2 " "	40	Connolly, Watson & Beem.	3.14 + 63.5	15.3	71.9	"	Mixture.	37809
" 17	"	37810	R. Mitchell	2 " "	30	Ramsay Bros.	3.44 + 57.2	3.0	80.8	"	" coated gum drops, starch gelatinized.	37810
" 17	"	37811	E. P. Charlton, Vancouver.	2 " "	25	Pan Confectionery Co., Chicago, Ill.	4.18 + 68.5	30.8	56.3	"	"	37811
" 17	"	37812	Europe Grocery	1 lb.	20	Unknown	3.06 + 55.9	2.3	80.0	"	Mixture, sample dirty.	37812

## DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

Dec. 10	Highly Coloured Confectionery.	41609	W. Speed, Victoria, B.C.	2 lbs.	30	Ganong Bros., St. Stephen, N.B.	3.94 + 60.3	9.2	76.3	None.	Mixture.	41609
" 10	"	41610	The Saunders Grocery Co., Ltd., Victoria, B.C.	2 " "	30	R. P. Rithet & Co., Victoria, B.C.	2.72 + 55.4	1.4	84.7	"	"	41610
" 10	"	41611	"	2 " "	30	"	1.00 + 52.8	7.8	90.9	"	Varied mixture, contain starch.	41611
" 13	"	41612	H. A. Lilley, Victoria, B.C.	2 " "	30	Vendor	2.54 + 39.0	14.6	79.9	"	Mixture.	41612
" 14	"	41613	R. Erskine & Co., Victoria, B.C.	2 " "	30	G. R. King, Victoria, B.C.	3.90 + 62.2	11.9	75.1	"	"	41613
" 14	"	41614	A. Pool, Victoria, B.C.	2 " "	30	Popham Bros., Victoria, B.C.	3.84 + 47.1	10.8	86.4	"	"	41614
" 16	"	41615	Harcop & Antipas, Victoria, B.C.	2 " "	50	Savin Bros., Vancouver	.....	.....	.....	.....	Mixture not highly coloured.	41615
" 16	"	41616	V. Stramatara, Victoria, B.C.	2 " "	40	The Bray Co., Victoria.	2.60 + 52.2	3.4	83.0	None.	Mixture.	41616
" 16	"	41617	"	2 " "	35	"	2.02 + 51.8	4.6	84.2	"	" contains starch.	41617
" 16	"	41618	T. Vasilatos, Victoria, B.C.	2 " "	50	Batger & Co., London, Eng.	1.62 + 46.5	12.8	88.6	"	"	41618



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## APPENDIX V.

## BULLETIN No. 201—FLAVOURING EXTRACT OF VANILLA.

OTTAWA, March 11, 1910.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to hand you a report dealing with 77 samples, purchased throughout Canada, as Flavouring Extract of Vanilla, in December last.

The last examination of this article was reported in Bulletin No. 89 (Sept., 1903). That report showed, in 21 samples, the following variations of character:—

Vanillin, varies in amount from	0·012	to	0·268
Coumarin	“	“	0·016 “ 0·160
Alcohol	“	“	5·470 “ 50·470
Sugar	“	“	0·600 “ 25·000

The present inspection (77 samples) indicates still greater variation:—

Vanillin varies in amount from	0·000	to	1·419
Coumarin	“	“	0·000 “ 0·186
Alcohol	“	“	1·300 “ 52·800

The question, ‘What is wanted, or expected, when a purchaser demands Extract of Vanilla?’ seems pertinent.

The dried, fermented pod of *Vanilla Planifolia*, is an article of export from the West Indian Islands, Mexico, and some other localities. The extract of Vanilla is undoubtedly supposed to be prepared from this pod, by maceration in alcohol, with or without the addition of sugar and glycerin. The United States defines Extract of Vanilla thus:—‘Vanilla Extract is the flavouring extract prepared from the dried, cured fruit of *Vanilla Planifolia*, with or without sugar or glycerin, and contains in 100 cubic centimetres, the soluble matters from not less than 10 grammes of the Vanilla bean.’

The extractive matters referred to are, a crystallin substance known as *Vanillin*, and certain resins; and the characteristic flavour of genuine vanilla is due to the combined flavours of these extractives. Undoubtedly the vanillin contributes chiefly to this total flavour; but that it does not entirely account for it is manifest when we consider that the most highly valued beans are not those which yield the highest percentage of vanillin. Thus Tiemann and Harmann (1) found as follows:—

Mexican beans	.....	1·69	p.c.	Vanillin
Bourbon	“ .....	2·48	“	“
Java	“ .....	2·75	“	“

Vanillin manufactured from Eugenol (and other sources) is an article of commerce, and is chemically identical with the vanillin from the bean. It is, however, quite evident that a solution of manufactured (Synthetic) vanillin, cannot be regarded as identi-

(1) Leach—Food Analysis, &c., p. 730,



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cal with the flavouring extract, as above defined. The difference is one of *flavour* due to the presence of specific resins (and probably small amounts of undetermined matters) peculiar to the bean, and as essential to the production of a true vanilla flavour as the vanillin itself.

In order to ascertain what amounts of vanillin may be present in the genuine extract, Winton and Silvermann (2) prepared five extracts, according to the formula given in the U. S. Pharmacopœia, and obtained as follows:—

Grade of Bean.	Specific Gravity.	Vanillin.	Alcohol (wgt)	Total Residue.	Cane Sugar.	Non-sugar Solids
Mexican (whole).....	1·0159	0·125	37·96	22·60	19·90	2·70
" (cut) .....	1·0146	0·065	39·92	23·10	19·20	3·90
South American (whole).....	1·0109	0·215	38·58	22·00	19·00	3·00
Bourbon (whole)...	1·0166	0·138	38·32	23·13	20·40	2·73
Tahiti (whole) .....	1·0104	0·108	38·84	21·75	20·00	1·75

From this it appears that the vanillin in genuine extracts may vary from about 0·065 to 0·215. It seems fair to conclude that where the vanillin much exceeds 0·200 per cent in an extract artificial or synthetic vanillin has been used.

*Coumarin* is a substance which somewhat resembles vanillin in its flavour, but is quite distinct chemically. It is found in the Tonka bean, and is also prepared synthetically. On account of its cheapness it is much used to adulterate vanilla extract, and it will be seen that in the collection now reported it is present in 61 out of 77 samples examined. In one case it entirely replaces vanillin. The flavour of Coumarin is not identical with that of vanillin. Leach (3) says of it:—‘The odour of Coumarin is more pungent and penetrating than that of vanillin, and in mixtures is apt to predominate over the milder and more delicate odour of vanillin.’

There can be no doubt that extracts containing Coumarin should be required to announce the fact, either by explicit statement, or by being sold as compounds.

The use of alcohol is necessary in preparing the genuine extract of vanilla, not so much to dissolve the vanillin which is rendered more soluble by the presence of sugar, as in order to get the characteristic resins into solution. Hence, an extract cannot meet the requirements of a true vanilla bean extract, unless it contains from 30 to 40 per cent of alcohol.

In the absence of any legal standard for Flavouring Extract of Vanilla, it is impossible for me to express an opinion upon the samples now reported. In a general way it may be asserted, (1) that those containing notably more than 0·200 per cent of vanillin are probably prepared from synthetic vanillin. There are some 31 samples of the present collection which fall in this class. (2) That those which contain less than 30 per cent of alcohol, are either not made from the bean, or are necessarily lacking in those odoriferous resins which are characteristic of the vanilla bean. Some 36 samples fall into this class. (3) Those samples which contain more than traces of Coumarin, are not, in the truest sense, extracts of vanilla, and should be sold as compounds. Some 58 samples must be thus classified.

The report now submitted, together with that published in Bulletin 89, will enable the public to judge of the character of Commercial Vanilla Extracts, and will also furnish material for the defining of this article, under section 26 of the Adulteration Act.

I beg to recommend the publication of this report as Bulletin No. 201.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,

*Chief Analyst.*

(2) Report Conn. Agr. Station—1901, 150.

(3) Foods, &c.,—p. 734.



BULLETIN No. 201—FLAVOURING EXTRACT OF VANILLA.

1 GEORGE V., A. 1911

Date of Collection.	Nature of Sample	No. of Sample.	Name and Address of Vendor.		Quantity.	Cost.	Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.			
										Vanillin per 100cc.	Coumarin per 100cc.	Alcohol by Volume.	No. of Sample

DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.

1909.										p. c.	p. c.	p. c.	p. c.
Dec.	6	Flavouring Extract of Vanilla.	41756	Nat. Drug. & Chem. Co., Halifax, N. S.	3	bots	20	Vendors	'Sovereign'	236	038	52 8	41756
"	7	"	41757	John Tobin & Co., Halifax, N. S.	3	"	45	Sheriff, Toronto		305	028	33 1	41757
"	7	"	41758	Chisholm & Co., Halifax, N. S.	3	"	30	J. E. Gass, Halifax, N. S.		272	057	17 7	41758
"	7	"	41759	R. B. Sifton & Co., Halifax, N. S.	3	"	38	Robinson Mfg. Co., Toronto		238	034	26 5	41759
"	13	"	41740	S. L. Cross, Kentville, N. S.	3	"	30	Pure-Gold Mfg. Co., Toronto		073	036	37 1	41740

DISTRICT OF PRINCE EDWARD ISLAND—THEO. MOORE, INSPECTOR.

Dec.	6	Flavouring Extract of Vanilla.	38601	C. C. Carleton, Souris	6	oz.	60	Chamberland Med. Co. To-Chamberland's superior vanilla flavouring compound		476	047	10 5	38601
"	7	"	38602	J. C. Ferguson, Souris	6	"	60	H. K. Wampole & Co., Toronto, H. K. Wampole & Co., Perth, Ont.		158	nil.	81 3	38602
"	8	"	38603	E. T. Reardon, Charlottetown	6	"	60	F. F. Dalley Co., Ltd., Ham-Dalley's pure fruit extract		070	043	30 6	38503
"	9	"	38604	D. McKenzie, Kensington	7 1/2	"	75	Imperial Extract Co., To-Sheriff's Imperial quintessence true vanilla.		268	029	37 5	38604
"	10	"	38605	G. W. Warren, Summerside	6	"	60	The Baird Co., Limited, Baird's superior extra vanilla flavouring extract. Highly concentrated.		241	044	31 7	38605

DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON, INSPECTOR.

Dec.	2	Flavouring Extract of Vanilla.	39613	Nat. Drug. & Chem. Co., Ltd., St. John, N. B.	3	bots	45	Vendors	'Star' Brand	084	036	46 8	39613
"	3	"	39614	Dearborn & Co., St. John, N. B.	3	"	75	"	'Dearborn' brand	392	nil.	33 1	39614



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"	8	"	"	39615	G. E. Barbour & Co., Ltd., St. John, N.B.	60	"	"	'Acorn' brand	503	021	38 8	39615
"	20	"	"	39616	F. D. Sadler, Perth, N. B.	30	"	"	Nat. Drug. & Chem. Co., St. Johns, N. B.	078	031	20 6	39616
1910.													
Jan.	4	"	"	39617	The Sussex Mercantile Co., Ltd., Sussex, N. B.	60	"	"	Vendors	093	012	41 9	39617

DISTRICT OF QUEBEC—E. BELAND, INSPECTOR.

1909.	Dec.	1	Flavouring of Vanilla.	36682	J. M. Ouillet, St. Anselme.	3	bots	30	W. Brunet & Cie, Quebec.	339	nil.	32 0	36682
"	"	1	"	36683	Charle Audet, St. Anselme.	3	"	30	J. B. Reneaud & Cie, Quebec.	009	078	13 7	36683
"	"	1	"	36684	J. B. Cadaret, St. Anselme.	3	"	30	Whitead & Turner, Quebec.	129	077	8 8	36684
"	"	1	"	36685	Arthur Lacasse, St. Claire	3	"	30	Dr. Ed. Morin, Quebec.	354	035	33 8	36685
"	"	1	"	36686	Joseph Brown, St. Claire.	3	"	30	Unknown	022	nil.	18 0	36686

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

Dec.	6	Flavouring of Vanilla.	38874	Alp. Casaubon, Sorel.	3	"	30	H. Jonas & Cie, Montreal.	030	nil.	17 7	38874
"	7	"	38875	H. Tourangeau, Verchères	3	"	25	Lyman's Ltd., Montreal.	353	128	35 5	38875
"	9	"	38876	L. Ed. Choquette, Farnham	3	"	30	G. A. Truax, Farnham.	511	128	7 8	38876
"	20	"	38877	H. P. Wales, Richmond.	3	"	30	Birks, Corner & Co., Montreal.	579	063	1 3	38877
"	21	"	38878	A. Leclair, Sherbrooke	3	"	30	Integrity Mills, Toronto.	040	110	7 8	38878

DISTRICT OF MONTREAL J. J. COSTIGAN, INSPECTOR.

Dec.	1	Flavouring of Vanilla.	40371	The Brodie Mfg. Co., St. Paul St., Montreal.	3	bots	45	Vendors	282	101	15 4	40371
"	1	"	40372	Pelletier et Frère, 17 Chaboillez Square, Montreal.	3	"	30	'Own Own' brand	nil.	095	15 0	40372
"	1	"	40373	James Duncan, Lachine, P.Q.	3	"	25	'Hercules' brand	163	042	19 1	40373
"	2	"	40374	Herron Leblanc Ltd., 573 St. Paul St., Montreal.	3	"	40	Vendors.	564	048	33 8	40374
"	2	"	40375	Henri Jonas Co., St. Paul St., Montreal.	3	"	37	"	304	nil.	27 4	40375







"	17	"	"	41433	Smarts Tea Co., Hamilton.	3	"	30	McLarens, Ltd., Hamilton	Maple leaf extract of vanilla	496	040	17 7	41433
"	21	"	"	41434	The J. M. Lowes Co., Ltd., Toronto.	3	"	50	Vendors	Labelled vanilla	336	097	14 7	41434
"	23	"	"	41435	Robinson Mfg. Co., Hamilton.	3	"	20	"	"	081	094	10 0	41435

DISTRICT OF LONDON—T. KIDD, INSPECTOR

Dec.	6	Flavouring of Vanilla.	Extract	30868	Alexander Steward, Guelph.	3	bots.	30	Vendor.		158	010	39 8	30868
"	8	"	"	30876	E. O. Ritze & Co., Berlin.	3	"	40	Nat. Drug & Chem. Co., Hamilton.		136	095	18 1	30876
"	10	"	"	30887	H. M. Myers, Stratford	3	"	45	Vendor		086	088	29 3	30887
"	11	"	"	30888	Chas. Andrews, Seaforth.	3	"	30	Can. Spice & Grocery Co., London, Ont.		180	031	13 1	30888
"	13	"	"	30899	James Wilson, Goderich	3	"	45	Toronto Pharmacy, Toronto		199	046	41 5	30899
"	16	"	"	44701	Peter Dill, Dublin	3	"	30	Robertsons Mfg. Co., To- ronto.		078	113	10 9	44701
"	17	"	"	44705	Wm. Stoneman, Mitchell	3	"	30	F. F. Dalley Co., Ltd., Hamilton.		153	098	29 9	44705

DISTRICT OF WINDSOR—JNO. TALBOT, INSPECTOR.

Dec.	6	Flavouring of Vanilla.	Extract	42655	Ponstie & Co., Aylmer.	3	bots.	30	Imperial Extract Co., To- ronto.		035	051	18 8	42655
"	6	"	"	42660	W. J. Gibson, Tillsonburg	3	"	30	F. F. Dalley Co., Ltd., Labelled gold seal Hamilton.		128	026	14 2	42660
"	7	"	"	42666	Ray P. Colbourn, Tillsonburg	3	"	25	Hamilton Chem. Works.	Topical flavouring extract.	148	036	19 4	42666
"	8	"	"	42672	R. Edwards, Simcoe	3	"	30	F. P. Reid & Co., Moncton, N.B.	Pyramid brand vanilla flavouring extract.	183	186	10 3	42672
"	9	"	"	42679	Fred. C. Harp, Brantford.	3	"	25	F. F. Dalley Co., Ltd., Hamilton.	Labelled gold seal	190	056	29 3	42679







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## DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR.

Dec.	9	Flavouring of Vanilla.	Extract	37788	Herbert Moore, minster.	New West-3 bts.	50	Empress Mfg. Co., Van- cover.	.....	.128	.030	25 6	37788
"	9	"	..	37789	A. & D. DesBrisay, minster.	New West-3 "	75	Young Bros .....	.....	1.419	.137	15 7	37789
"	9	"	..	37790	A. Lilly, Vancouver....	..... 3 "	75	Pure Gold Mfg. Co....	.....	.089	.036	37 5	37790
"	13	"	..	37791	H. A. Edgett Co., Vancouver..	3 "	40	Climax Extract Co.....	.....	.006	.036	17 3	37791
"	13	"	..	37792	Geo. Wagg, Vancouver.....	3 "	40	Gorman, Eckert Co., Lon- don.	.....	.059	.057	21 3	37792

## DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

Dec. 10	Flavouring of Vanilla.	Extract	41594 Windsor Grocery Co., Victoria, B.C.	3 bots.	75	Pure Gold Mfg. Co., To- ronto.	Pure Gold vanilla flavour- ing.	·086	·044	37 8	41594
" 10	"	"	41595 The Saunders Grocery Co., Ltd., Victoria, B.C.	3 "	75	Sherriffs, Toronto.....	Sherriffs Imperial quintes- sence of true vanilla.	·263	·024	36 1	41595
" 13	"	"	41596 Acton Bros., Victoria, B.C.....	3 "	75	Empress Mfg. Co., Van- couver, B.C.	'Empress' brand .....	·136	·053	28 3	41596
" 14	"	"	41597 R. Erskine & Co., Victoria, B.C.	3 "	75	Pioneer Coffee Mills, Vic- toria, B.C.	'Star' brand .....	1·088	Nil.	26 5	41597
" 15	"	"	41598 W. A. Jameson Coffee Co., Vic- toria, B.C.	3 "	60	Empress Mfg. Co., Van- couver, B.C.	'Nector' flavouring ex- tract.	·066	·056	18 8	41598







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## APPENDIX W.

## BULLETIN No. 202—BORAX (EXAMINATION FOR ARSENIC.)

OTTAWA, March 17, 1910.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you herewith a report upon the examination of 151 samples of Borax collected throughout Canada in December last.

The inspection has regard to the contamination of this article by arsenic. Borax is very largely employed as a preservative for meats, butter, and other articles of food and it is consequently of great importance that it should be free from arsenic, or other dangerous impurity. One hundred and thirty five (135) samples are found to be entirely free from arsenic. The remaining sixteen (16) samples contain the following amounts of arsenic ( $\text{As}_2\text{O}_3$ ) per 100 grammes; also stated as parts per million.

No. of Sample.	Milligrammes per 100 grammes.	Parts per million.
42670 .....	1.0	10
36659 .....	0.5	5
42844 .....	0.5	5
30867 .....	0.5	5
42673 .....	0.5	5
42689 .....	0.5	5
43606 .....	0.5	5
41622 .....	0.5	5
36660 .....	0.4	4
41407 .....	0.4	4
42691 .....	0.4	4
41784 .....	0.3	3
41777 .....	0.2	2
39589 .....	0.2	2
42681 .....	0.2	2
41624 .....	0.2	2

The effective dose of arsenic named by the British Pharmacopoeia varies from 1 to 4 milligrammes. We possess no standard of purity for borax as regards arsenic, but it is safe to say that even the maximum amount found cannot be regarded as dangerous to health.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



BULLETIN No. 202—BORAX—EXAMINATION FOR ARSENIC.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.		No. of Sample.
				Quantity.	Cents.			Arsenic per 100 Grams.		

DISTRICT OF NOVA SCOTIA—R. J. WAUGH, INSPECTOR.

1909.										
Dec.	6 Borax	41776	Nat. Drug and Chem. Co., Halifax, N.S.	1 lb.	8	Am. Alkali Co.	20th Century crystals.	None.		41776
"	"	41777	C. E. Huggins, Halifax, N.S.	1 "	10	Nat. Drug and Chem. Co., Halifax, N.S.	Crystals	0.2	Milligrams.	41777
"	"	41778	M. P. Caffrey, Halifax, N.S.	1 "	10	"	"	None.		41778
"	"	41779	M. D. Logan, Halifax, N.S.	1 "	15	"	"	"		41779
"	"	41780	Irwin & Sons, Halifax, N.S.	1 "	35	E. Merek, Darmstadt, Ger- many.	C. P. powdered.	"		41780
"	"	41781	J. St. C. Coombes, Halifax, N.S.	1 "	20	Nat. Drug and Chem. Co., Halifax, N.S.	Powdered.	"		41781
"	10 "	41782	Truro Drug Store, Truro, N.S.	1 "	15	Black & Co., Truro, N.S.	"	"		41782
"	10 "	41783	Black & Co., Truro, N.S.	1 "	8	W. T. Cox, Montreal, P. Q.	"	"		41783
"	13 "	41784	D. Day, Wolfville, N.S.	1 "	10	Nat. Drug and Chem. Co., Halifax, N.S.	Powdered.	0.3	Milligrams.	41784
"	13 "	41785	A. V. Rand, Wolfville, N.S.	1 "	15	"	Crystals	None.		41785

DISTRICT OF PRINCE EDWARD ISLAND—THEO. MOORE, INSPECTOR.

Dec.	7 Borax	38573	A. A. McDonald, Souris.	1 lb.	10	Nat. Drug and Chem. Co., Halifax, N.S.		None.		38573
"	7 "	38574	J. C. Ferguson, Souris.	1 "	15	"		"		38574
"	8 "	38575	Johnson & Johnson, town.	1 "	15	Lymans, Ltd., Montreal.		"		38575
"	8 "	38576	A. W. Reddin, Charlottetown.	1 "	15	Lyman & Son, Montreal.		"		38576



"	9	"	Jardine & Bernard, Kensington.	1 " ..	15	Can. Drug Co., Halifax, N.S.	"	38577
"	9	"	Edgar Keir, Kensington.....	1 " ..	15	"	"	38578
"	10	"	A. W. P. Gourlie, Summerside	1 " ..	15	Lyman, Knox & Co., Montreal.	"	38579
"	10	"	McFadyen & McLellan, Summerside.	1 " ..	15	Can. Drug Co., St. John, N.B.	"	38580
"	10	"	P. N. Enman, Summerside....	1 " ..	15	Nat. Drug Co., Halifax, N.S.	"	38581
"	15	"	McDonald & McKinnon, Charlottetown.	1 " ..	15	Lyman Sons & Co., Montreal	"	38582

DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON, INSPECTOR.

Dec.	2	Borax	Nat. Drug and Chem. Co., Ltd., St. John, N.B.	1 lb. . .	10	Borax Consolidated Co., Liverpool, Eng.	None.	39588
"	14	"	C. A. Burchill, Fredericton, N.B.	1 " ..	25	Can. Drug Co., Ltd., St. John, N.B.	0.2 Milligrams.	39589
"	15	"	Johnston & Johnston, St. Stephen, N.B.	1 " ..	20	Nat. Drug and Chem. Co., Ltd., St. John, N.B.	None.	39590
"	17	"	C. A. McKeen, Woodstock, N.B.	1 " ..	20	The Can. Drug Co., St. John, N.B.	"	39591
"	20	"	R. W. L. Earle, M.D., Perth, N.B.	1 " ..	20	Unknown.	"	39592
1910.								
Jan.	4	"	B. J. Sharp, Sussex, N.B....	1 " ..	15	Nat. Drug and Chem. Co., Ltd., St. John, N.B.	"	39593
"	5	"	The Acadia Drug Co., Moncton, N.B.	1 " ..	25	"	"	39594
"	6	"	T. J. Dwyer, Newcastle, N.B.	1 " ..	20	"	"	39595
"	7	"	A. E. Shaw, Newcastle, N.B.	1 " ..	20	"	"	39596
"	8	"	A. McG. McDonald, Campbelltown, N.B.	1 " ..	20	"	"	39597
"	8	"	F. Wran, Campbellton, N.B.	1 " ..	15	Lymans, Ltd., Montreal.	"	39639

DISTRICT OF QUEBEC—E. BELAND, INSPECTOR.

1909.								
Dec.	1	Borax	Orel Roy, St. Anselme.....	1 lb. . .	15	Charle Audet, St. Anselme..	None	39657
"	1	"	Ludger Mignault, St. Anselme.	1 " ..	12	Antoine Carrier fils, Levis....	"	39658
"	1	"	Edmond Folteau, St. Anselme.	1 " ..	15	Sultana Mgr., Montreal.	0.5 Milligrams.	39659



BULLETIN No. 202—BORAX—EXAMINATION FOR ARSENIC.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.		Quantity.	Cost. Cents.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.		No. of Sample.
									Arsenic per 100 Grams.		

DISTRICT OF QUEBEC—E. BELAND, INSPECTOR *Concluded.*

1909.	Dec.	1	Borax	36660	J. M. Ouillet, St. Anselme	1 lb	15	Carrier fils, Levis		0.4 Milligrams.	36660
"	"	1	"	36661	Urbain Roy, St. Anselme	1 "	15	"		None	36661
"	"	1	"	36662	J. B. Cadaret, St. Anselme	1 "	15	Whitead & Turner, Quebec		"	36662
"	"	2	"	36663	C. E. Royer, St. Claire	1 "	13	Lemieux fils, Quebec		"	36663
"	"	4	"	36664	Venerand Allaire, St. Leon de Standon	1 "	15	Unknown		"	36664
"	"	4	"	36665	O. Gagnon, St. Leon de Standon	1 "	30	Dr. Ed. Morin, Quebec		"	36665
"	"	7	"	36666	William Bernard, St. Rose	1 "	15	Unknown		"	36666

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

Dec.	6	Borax	38849	Alf. Plante, Sorel	2 pkts.	10	Pugsley, Dignan & Co., Toronto		None		38849
"	6	"	38850	R. Duguay & Cie, La Bai	1 lb	10	Hudson & Orsali, Montreal		"		38850
"	7	"	38851	C. Langlois, Vercheres	1 "	14	L. Chaput fils & Cie, Montreal		"		38851
"	9	"	38852	G. L. Elmes, Farnham	2 pkgs	14	The R. Creig Co., Ltd., Toronto	'White Swan'	"		38852
"	20	"	38853	A. McLean & Middle Bros., Danville	3 "	15	Lymans Ltd., Montreal		"		38853
"	20	"	38854	H. Roux, Danville	2 "	20	The Alph. Chem. Co., Berlin	Moody's reliable powdered borax compound.	"		38854
"	20	"	38855	P. J. Girard, Richmond	2 "	20	The Pure Gold Mfg. Co., Toronto	Guaranteed pure by manufacturer.	"		38855



"	21	"	"	38856	Gosselin & Paradis, Magog...	1 lb.	10	Hudon, Herbert & Cie, Mon- treal.	"	38856
"	23	"	"	38857	D. Gagnon, St. Hyacinthe...	3 pkgs	15	Pugsley, Dingman & Co., Ltd., Toronto,	"	38857
"	23	"	"	38858	P. Racine, St. Hyacinthe...	3 "	15	Bee Starch Co., Montreal...	"	38858

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

Dec.	10	Borax	40361	Dr. Gauthier, Valleyfield...	1 lb.	20	Lymans, Ltd.	None	40361
"	10	"	40362	Dr. J. E. St. Onge, Valleyfield	1 "	25	"	"	40362
"	10	"	40363	J. E. H. Quipp, Windsor St., Montreal.	1 "	20	"	"	40363
"	10	"	40364	A. Lebeau, 549 St. James St., Montreal.	3 pkts.	40	The Fielding Chem. Co., Ltd., Guelph, Ont.	"	40364
"	16	"	40365	Z. Gilbert, St. Jerome, P.Q.	1 lb.	20	Lyman, Knox Co., Ltd., Mon- treal.	"	40365
"	16	"	40366	Dr. Fournier, St. Jerome, P.Q.	1 "	25	Nat. Drug & Chem. Co.	"	40366
"	21	"	40367	James Fortune, Huntingdon, P.Q.	3 pkts.	30	Nat. Drug & Chem. Co., Ltd	"	40367
"	21	"	40368	"	1 lb.	20	"	"	40368
Jan.	10	"	40369	M. Albert, 971 St. Lawrence B., Montreal.	1 "	15	Unknown	"	40369
"	10	"	40370	Lancot & Brault, 820 St. Lawrence B., Montreal.	1 "	15	A. Filion, Montreal	"	40370

DISTRICT OF OTTAWA—J. A. RICKY, INSPECTOR.

1909.	Dec.	3	Borax	42836	N. W. Campbell, Ottawa	1 lb.	20	Ottawa Drug Co., Ottawa	None	42836
"	"	3	"	42837	J. S. Brown, Ottawa	1 "	20	Nat. Drug & Chem. Co., Ltd., Ottawa.	"	42837
"	"	3	"	42838	W. F. Gibson, Ottawa	1 "	20	Unknown	"	42838
"	"	4	"	42839	G. F. Brethour, Ottawa	1 "	20	Nat. Drug & Chem. Co., Ltd., Ottawa.	"	42839
"	"	6	"	42840	F. W. Day, Ottawa	1 "	20	Lymans, Ltd., Montreal.	"	42840
"	"	11	"	42841	G. E. Moore, Carleton Place	1 "	20	Nat. Drug & Chem. Co., Ltd., Ottawa.	"	42841
"	"	14	"	42842	A. D. MacLennan, Kemptville	1 "	20	Lyman Sons & Co., Montreal	"	42842

\*Contains Carbonate of Soda.



BULLETIN No. 202—BORAX—EXAMINATION FOR ARSENIC.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.		Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report (Is not an expression of opinion).	RESULTS OF ANALYSIS.		No. of Sample.
			Quantity.	Cents.	Arsenic per 100 Grams.						
DISTRICT OF OTTAWA J. A. RICKEY, INSPECTOR—Concluded.											
1909.											
Dec. 15	Borax	42843	C. H. Lewis, Ottawa.	1 lb.	12		Nat. Drug & Chem. Co., Ltd., Crystals, Ottawa.	None.			42843
" 16	"	42844	J. A. Johnston, Smith's Falls.	1 "	20		Unknown.	Powdered	0.5	Milligrams.	42844
" 17	"	42845	G. A. Aikin, Finch.	1 "	15		Nat. Drug & Chem. Co., Ltd., Crystals, Ottawa.	None.			42845
DISTRICT OF KINGSTON JAS. HOGAN, INSPECTOR.											
Nov. 29	Borax	42752	Nat. Drug Co., Kingston.	1 lb.	10		Unknown.		None.		42752
" 29	"	42753	A. P. Chown, Kingston	1 "	15		H. Skinner Co., Kingston.		"		42753
" 29	"	42754	C. S. Prouse, Kingston.	1 "	20		Unknown.		"		42754
" 29	"	42755	G. Mahood, Kingston.	1 "	15		Nat. Drug Co.		"		42755
" 29	"	42756	T. L. Best, Kingston	1 "	20		Unknown		"		42756
Dec. 1	"	42757	D. Bleeker, Belleville	1 "	15		"		"		42757
" 1	"	42758	W. H. A. Sempie, Cobourg.	1 "	15		E. G. West, Toronto		"		42758
" 1	"	42759	H. Mitchell, Port Hope.	1 "	15		Lynman, Montreal.		"		42759
" 2	"	42760	W. Madill, Peterboro	1 "	15		Unknown		"		42760
" 2	"	42761	Nugent Drug Co., Peterboro.	1 "	15		Drug Trading Co., Toronto.		"		42761



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DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.

14	Dec.	1	Borax	41401	H. Poehlman, Collingwood.	1 lb.	10	Young Winfield, Ltd., Hamilton.	Labelled proved pure Borax.	Young's Im-	None	41401
25	"	2	"	41402	J. H. Brown, Thornbury.	1 "	10	McLaren's, Ltd., Hamilton.	McLaren's invincible quality Borax the highest grade obtainable.	"	"	41402
		2	"	41403	Geo. Dyce & Co., Meaford.	1 "	10	The F. F. Dalley Co., Ltd., Hamilton.	Dalley's Chemically pure borax.	"	"	41403
		3	"	41404	W. J. Ward, Owen Sound.	1 "	10	Canada Spice & Grocery Co., Ltd., London, Ont.	'Crest' brand	"	"	41404
		6	"	41405	The Hennessey Drug Stores, Ltd., Hamilton.	1 "	10	The Nat. Drug & Chem. Co., Ltd., Hamilton.		"	"	41405
		7	"	41406	Reliable Drug Stores, Dunville	1 "	15	The Nat. Drug & Chem. Co., Ltd., Hamilton.		"	"	41406
		7	"	41407	F. J. Brown, Port Colborne.	1 "	15	The Dom. Drug Co., Ltd., Hamilton.		0.4	Milligrams	41407
		7	"	41408	Chas. Collins, Welland	1 "	20	The Lyman Bros. Co., Ltd., Toronto.		None		41408
		20	"	41409	W. F. Cantelon, Toronto.	1 "	10	Drug Trading Co., Ltd., Toronto.		"	"	41409
		20	"	41410	J. W. Struthers, Toronto.	1 "	15	Drug Trading Co., Ltd., Toronto.		"	"	41410

DISTRICT OF LONDON—T. KIDD, INSPECTOR.

	Dec.	6	Borax	30867	J. Burgardos, Guelph.	1 lb.	20	Nat. Drug Co., Toronto.		0.5	Milligrams	30867
		6	"	30869	Beatie & Co., Guelph.	3 pks.	15	Winer & Co., Hamilton.		None		30869
		7	"	30873	Mr. Petrie, Guelph.	3 "	15	McArthur Cornell & Co., Montreal.		"		30873
		8	"	30878	Roose Pharmacy, Berlin.	1 lb.	20	Unknown		"		30878
		9	"	30879	J. A. Monteth & Co., Stratford	3 pks.	30	McLaren's, Hamilton		"		30879
		9	"	30880	Barnsdale & Co., Stratford.	3 "	15	Canada Spice & Grocery Co., London, Ont.		"		30880
		9	"	30884	McCulla & Hank, Stratford	3 1/2 lb.	15	F. F. Dalley Co., Hamilton.		"		30884
		11	"	30890	Mathew Williams, Seaforth	3 pks.	15	Lyon Spice Co., London		"		30890
		11	"	30891	Chas. Aberhart, Seaforth	1 lb.	20	Lyman Bros., Toronto.		"		30891
		16	"	44703	Michael Klinghamer, Dublin.	3 "	15	Gorman & Eckart, London.		"		44703



BULLETIN No. 202—BORAX—EXAMINATION FOR ARSENIC.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.		No. of Sample.
				Quantity.	Cents.			Arsenic per 100 Grams.		
DISTRICT OF WINDSOR JNO. TALBOT, INSPECTOR.										
Dec.	6 Borax	42656	J. E. Richards & Co., Aylmer, Ont.	1 lb.	20	Nat. Drug Co., Hamilton.	.....	None	.....	42656
"	"	42657	Ern. A. Campbell, Aylmer, Ont.	1 "	20	Saunderson & Percy, Toronto	.....	"	.....	42657
"	"	42661	McDonald's Drug Store, Tillsonburg.	1 "	20	Nat. Drug Co	.....	"	.....	42661
"	"	42670	J. Austin & Co., Simcoe	1 "	15	Nat. Drug Co., Hamilton	.....	1.0 Milligrams	.....	42670
"	"	42673	E. H. Jackson, Simcoe	1 "	20	Unknown	.....	0.5 "	.....	42673
"	"	42676	H. E. Perrott, Brantford	1 "	10	"	.....	None	.....	42676
"	"	42681	Milton H. Robertson, Brantford.	1 "	15	G. Foster & Son, Brantford	.....	0.2 Milligrams	.....	42681
"	"	42689	W. R. Venning, London	1 "	20	Nat. Drug. Co., London.	.....	0.5 "	.....	42689
"	"	42690	T. N. Sumner, London	1 "	15	"	.....	None	.....	42690
"	"	42691	Anderson & Nelles, London	1 "	20	"	.....	0.4 Milligrams	.....	42691

DISTRICT OF MANITOBA A. C. LARIVIERE, INSPECTOR.

Dec. 21	Borax	39841	T. T. Malcolm, Dauphin	1 lb.	20	Martin Bole Wynne Co., Winnipeg.	.....	None	.....	39841
"	"	39842	The Red Cross Pharmacy, Dauphin.	1 "	20	Unknown	.....	"	.....	39842
"	"	39843	W. H. Morrison, Dauphin	1 "	15	The Bole Drug Co., Winnipeg	.....	"	.....	39843



"	22	"	39844	The Lincoln Park Drug Co., Winnipeg.	1 "	15	Unknown....	"	39844
"	22	"	39845	Gillespie & Campbell, Winni- peg.	1 "	25	"	"	39845
"	23	"	39846	Gibbs Drug Store, Selkirk.	1 "	15	Winer & Co., Hamilton..	"	39846
"	23	"	39847	R. H. Gilhuly, Selkirk.....	1 "	15	Unknown.....	"	39847
"	28	"	39848	S. S. Smith, Souris ..	1 "	15	"	"	39848
"	28	"	39849	The Morton Drug Co., Souris.	1 "	20	The Bole Drug Co., Winnipeg.	"	39849
"	29	"	39850	D. E. Clements Drug Store, Brandon.	1 "	20	Unknown.....	"	39850

DISTRICT OF CALGARY—R. W. FLETCHER, INSPECTOR.

Dec.	10	Borax	43601	B. F. Souch, Medicine Hat	1 lb.	20	Nat. Drug and Chem. Co., Hamilton.	None.....	43601
"	10	"	43602	E. M. Cawker, Medicine Hat	1 "	25	Unknown	"	43602
"	11	"	43603	C. S. Pringle, Medicine Hat	1 "	20	Lyman & Sons, Montreal...	"	43603
"	16	"	43604	McCutcheon & McGill, Cal- gary.	1 "	20	Martin Bole Wynne, Winni- peg.	"	43604
"	16	"	43605	C. A. Wallace, Calgary....	1 "	20	Unknown.....	"	43605
"	30	"	43606	Higinbotham & Co., Leth- bridge.	1 "	20	"	0 5 Milligrams...	43606
"	30	"	43607	Alberta Drug and Bk. Co., Lethbridge.	1 "	20	"	None.....	43607
1910.									
Jan.	4	"	43608	D. W. MacDonald Drug Co., Edmonton.	1 "	20	"	"	43608
"	4	"	43609	C. H. Graydon Drug Store, Edmonton.	1 "	20	Lyman's, Ltd., Montreal...	"	43609
"	4	"	43610	A. Archibald, Edmonton..	1 "	20	"	"	43610

DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR.

1909.									
Dec.	8	Borax	37768	McDowell Atkins Watson Co., Vancouver.	1 lb.	25	Henderson Bros., Vancouver.	None.....	37768
"	8	"	37769	Red Raven Drug Store, Van- couver.	1 "	35	"	"	37769



BULLETIN No. 202 BORAX—EXAMINATION FOR ARSENIC.

Date of Collection.	Nature of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.		No. of Sample.
			(Quantity.)	(Per Cent.)			Arsenic per 100 Grams.	—	

DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR—Concluded.

1909.									
Dec.	Borax	Nelson's Drug Store, Vancouver.	1 lb.	25	Henderson Bros., Vancouver	.....	None	.....	37770
"	"	W. E. Law, Vancouver.	1 "	25	"	.....	"	.....	37771
"	"	W. Ferguson & Co., Vancouver	1 "	30	"	.....	"	.....	37772
"	"	McDuffie Bros., Vancouver.	1 "	25	"	.....	"	.....	37773
"	"	Red Cross Drug Store, Vancouver.	1 "	35	"	.....	"	.....	37774
"	"	Henderson Bros., Ltd., Vancouver.	1 "	15	"	.....	"	.....	37775
"	"	W. E. Law, Vancouver.	1 "	20	"	.....	"	.....	37776
"	"	E. Shoff, Vancouver.	1 "	20	"	.....	"	.....	37777

DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

Dec	Borax	Wm. Jackson & Co., Victoria, B.C.	1 lb	25	Henderson Bros., Ltd., Victoria, B.C.	.....	None	.....	41619
"	"	D. E. Campbell, Victoria, B.C.	1 "	25	Lynan's, Ltd., Montreal	.....	"	.....	41620
"	"	W. S. Terry, Victoria, B.C.	1 "	25	"	Pure powdered borax.	"	.....	41621
"	"	Hall & Co., Victoria, B.C.	1 "	25	Henderson Bros., Ltd., Victoria, B.C.	.....	0.5 Milligrams.	.....	41622



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"	20	"	"	41623	Cyrus H. Bower, Victoria, B.C.	1	"	25	Lyman & Sons, Ltd., Montreal.	None.	41623
"	20	"	"	41624	B. C. Drug Co., Ltd., Victoria, B.C.	1	"	25	Henderson Bros., Ltd., Victoria, B.C.	0.2 Milligrams.	41624
"	20	"	"	41625	Dean & Hiscocks, Victoria, B.C.	1	"	25	"	None.	41625
"	20	"	"	41626	F. J. Williams, Victoria, B.C.	1	"	25	"	"	41626
"	20	"	"	41627	Thos. Shotbolt, Victoria, B.C.	1	"	25	Lyman's, Ltd., Montreal.	"	41627
"	20	"	"	41628	Henderson Bros., Ltd., Victoria, B.C.	1	"	25	Henderson Bros., Ltd., Victoria, B.C.	"	41628







## APPENDIX X.

## BULLETIN No. 203—PEPPER.

OTTAWA, March 21, 1910.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you herewith a report upon two hundred and eighty (280) samples of pepper, collected throughout Canada in September and October of last year. The results may be summarized thus :—

	Black Pepper.	White Pepper.	Total.
Genuine. ....	100	104	204
Doubtful. ....	15	11	26
Adulterated ...	25	24	49
Lost. ....	—	1	1
Total.. .	140	140	280

Of those samples designated as *doubtful* it is fair to say that, the small amounts of foreign matter found in most of them may be due to causes for which the manufacturer is not to blame. It is quite a usual thing for vendors to refill their containers before these are entirely emptied of stock which may have had another origin, and be of a different quality, from that last placed in them. And again, most spice grinders utter different grades of pepper, and the accidental or unintentional inter-mixture of a lower grade article is made possible by the use of the same mill, sieves, &c., in manufacture.

It will be noted that none of these samples are sold as *Compound*, although one vendor (No. 42620) is unwilling to guarantee his goods as pure.

Pepper continues to be the most extensively adulterated spice on the market. It is further to be noted that in certain districts of Canada, this spice appears to be much more largely adulterated than in others. This fact is well brought out in the following table, which summarizes the results of inspection of pepper, since 1876 :—

The inspectoral districts of Ottawa and Windsor, which were created in 1905 and 1907 respectively, do not appear in the above.

The following synopsis presents very concisely the results of examination of pepper for the whole period from 1877 to 1910, for each of the inspectoral districts of Canada :—



INSPECTION OF PEPPER, 1876 TO 1910 <sup>(1)</sup>

Year.	District of Nova Scotia.		District of Quebec.		District of Montreal.		District of Toronto.		District of New Brunswick.		District of London.		District of Manitoba.	
	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.
1876 & 1877 <sup>2</sup> .	6	4	6	5	16	16	8	5						
1878.	6	3	6	3	16	15	12	5						
1879.	8	4	11	5	15	9	10	4						
1880.	7	12	8	1	8	1	9	3	9	9				
1881.	7	3	11	0	11	11	11	9	9	7				
1882.	4	1	5	4	12	10	10	5	12	10				
1883.	8	3	2	1	11	10	4	2	5	5	2	0		
1884.	1	1	2	0	8	7	3	1	6	4	4	4		
1885.	12	3	2	0	18	10	23	15	6	5	5	4	2	2
1886 <sup>4</sup> .	4	1	5	4	4	3	4	4	4	2	4	2		
1888.	10	6	8	8	10	7	10	6	8	5			8	4
1890 <sup>5</sup> .			25	11	38	26	10	1						
1891.			23	10	30	21								
1894.			10	3	10	8	10	1	8	5	8	2	8	2
1896.	15	4	15	6	17	10	15	1	13	2	13	1	12	2
1899.							10	2						
1900.	10	1	10	4			10	0			9	5	10	0
1904.	10	1	18	12	19	19	17	13	7	3	11	6	10	1
1905 <sup>7</sup> .	7	0			12	8	12	4	7	3	10	3	7	4
1905 <sup>8</sup> .	24	1	23	17	24	12	24	6	24	10	24	6	25	11
1908 <sup>9</sup> .	20	1	23	9	20	9	20	2	20	5	18	3	20	8
1910 <sup>10</sup> .	20	1	20	8	20	5	20	7	20	1	20	1	20	1
Total for period of 34 years. ....	180	42	229	111	319	217	250	98	158	76	128	37	122	35

<sup>1</sup> In some of the earlier years a few samples of cayenne (red pepper) are included in these numbers.  
<sup>2</sup> The first year in which the Adulteration Act was enforced.  
<sup>3</sup> The first Chief Analyst (Mr. Evans) appointed.  
<sup>4</sup> Mr. Macfarlane appointed Chief Analyst.  
<sup>5</sup> Bulletin No. 20. <sup>6</sup> Bulletin No. 95. <sup>7</sup> Bulletin No. 103.  
<sup>8</sup> Bull. No. 106. <sup>9</sup> Bull. No. 165. <sup>10</sup> Bull. No. 203.

INSPECTION OF PEPPER, 1876 TO 1910.

Year.	District of Kingston.		District <sup>11</sup> of British Columbia.		District of Prince Edward Island.		District of Calgary.		District of St. Hyacinthe.		Canada.	
	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.
1876 & 1877 <sup>2</sup> .											36	30
1878.											40	28
1879.											44	22
1880.											42	18
1881.											45	30
1882.											43	30
1883.											32	21
1884.											24	17
1885.											68	39
1886 <sup>4</sup> .		4		4							29	20
1888.		8		1							62	43

<sup>11</sup> Includes inspectoral districts of Vancouver and Victoria.  
<sup>12</sup> The inspectoral districts of Ottawa and Windsor, created in 1905 and 1907, are not included.



## SESSIONAL PAPER No. 14

INSPECTION OF PEPPER, 1876 TO 1910—*Concluded.*

Year.	District of Kingston.		District <sup>11</sup> of British Columbia.		District of Prince Edward Island.		District of Calgary.		District of St. Hyacinthe.		Canada.	
	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.	Exam-ined.	Adul-terated.
1890 <sup>5</sup> .....	...	...	...	...	...	...	...	...	...	...	73	38
1891.....	...	...	...	...	...	...	...	...	...	...	53	31
1894.....	8	8	...	...	...	...	...	...	...	...	62	29
1896.....	13	5	...	...	...	...	...	...	...	...	113	31
1899.....	...	...	...	...	...	...	...	...	...	...	10	2
1900.....	9	4	8	1	...	...	...	...	...	...	66	15
1904 <sup>6</sup> .....	14	4	12	6	6	1	6	6	...	...	130	72
1905 <sup>7</sup> .....	10	4	8	4	2	0	1	1	10	10	86	41
1905.....	24	11	24	9	26	7	24	8	24	18	290	117
1908.....	20	4	40	3	20	4	20	3	20	12	261	63
1910.....	20	4	40	1	—	—	20	1	20	10	240	40
	130	55	132	24	54	12	71	19	74	50	1859	777

	District of Ottawa.		District of Windsor.	
	Examined.	Adulterated.	Examined.	Adulterated.
1908 (Bull. 165) .....	20	4	17	1
1910 (Bull. 203) .....	20	4	20	4
	40	8	37	5

## FROM 1877 TO 1910.

Inspectoral Districts.	Date of first Inspection.	Total samples examined.	Found Adulterated.	Percentage of Adulteration.
Nova Scotia.....	1877	180	42	23
Prince Ed. Island.....	1904	54	12	22
New Brunswick.....	1880	158	76	48
Quebec .....	1877	229	111	49
St. Hyacinthe.....	1905	74	50	65
Montreal.....	1877	319	217	68
Ottawa.....	1908	40	8	20
Kingston .....	1886	130	55	43
Toronto.....	1877	250	98	39
London.....	1883	128	37	29
Windsor .....	1908	37	5	14
Manitoba .....	1877	122	35	29
Calgary.....	1904	71	19	27
Vancouver.. ..	1900 )	132	24	19
Victoria .....	1900 )			
Total .....		1924	789	40

It will be noted that the average adulteration of pepper throughout Canada for the above period of 33 years, is 40 per cent. this is much exceeded in the districts of St. Hyacinthe and Montreal.

The only adulterations which can be made a basis for judging pepper, at present, are the admixture of pepper with foreign matters, and excessively high ash, which itself means the presence of mineral matter (dirt) in excess of a standard proposed by me in 1890 (See Bulletin 20). The standard was derived from original work on pepper, and from a study of all the available literature of the subject; as explained in Bull. 20. The standard rests however, upon a scientific rather than upon a legal basis; and would have to be established by evidence in the event of a contested case in the courts. It is hoped that this state of things will be improved by the legalizing of Spice Standards and limitations of variability under section 23 of the Adulteration Act, before another inspection of pepper is made. Of the present collection, 18 samples contain more than 7 per cent, of ash, and are adjudged to be adulterated on this account.

I beg to recommend the publication of this report as Bulletin No. 203.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
Chief Analyst.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF NOVA SCOTIA—

1909.						
Oct.	5	White Pepper..	41826 Forristall & Co., Halifax, N.S.	8 oz..	20	Wentzell's, Ltd., Halifax, N.S.
"	5	" ..	41827 W. J. Hopgood & Son, Halifax, N.S.	3 pks.	30	W. H. Schwartz & Sons, Halifax, N.S.
"	5	" ..	41828 Dillon Bros., Halifax, N.S.	3 "	15	Jno. P. Mott & Co., Halifax, N.S.
"	6	" ..	41829 J. F. Crowe & Co., Halifax, N.S.	3 "	10	W. H. Schwartz & Sons, Halifax, N.S.
"	6	" ..	41830 Jno. P. Mott & Co., Halifax, N.S.	3 "	...	Vendors.....
"	6	" ..	41831 G. A. Cook & Co., Halifax, N.S.	8 oz..	20	Todhunter & Mitchell, Toronto.
"	8	" ..	41832 Murphy & Demont, Windsor, N.S.	3 pks.	30	Nat. Drug Co., Halifax. ....
"	11	" ..	41833 The 2 Barkers, Ltd., Amherst, N.S.	8 oz..	18	Gardiner, Dunn & Co., Hamilton.
"	12	" ..	41834 Black & Co., Truro, N.S.	8 "	11	C. H. Cochrane & Co., Ottawa
"	12	" ..	41835 Ryan Bros., Truro, N.S.	3 pks.	24	F. F. Dalley Co., Ltd., Hamilton.

DISTRICT OF NEW BRUNSWICK—

Sept.	8	White Pepper..	39553 G. E. Barbour Co., Ltd., St. John, N.B.	½ lb ..	14	Vendors.....
"	14	" ..	39554 W. A. Porter, St. John, N.B.	½ " ..	20	Todhunter, Mitchell & Co., Toronto.
"	21	" ..	39555 H. C. Jewett, Fredericton, N.B.	½ " ..	20	" " ..
"	22	" ..	39556 R. E. Holyoke, Woodstock, N.B.	½ " ..	20	Dearborn & Co., St. John, N.B.
"	24	" ..	39557 J. T. Baird Co., Ltd., Perth, N.B.	3 pks.	30	" " ..
Oct.	5	" ..	39558 Sussex Mercantile Co., Ltd., Sussex, N.B.	½ lb ..	20	" " ..
"	6	" ..	39559 F. P. Reid & Co., Moncton, N.B.	3 pks.	24	Vendors.....
"	7	" ..	39560 Baird & Peters, Newcastle, N.B.	3 "	25	Jno. P. Mott & Co., Halifax.
"	7	" ..	39561 Miller Bros., Newcastle, N.B.	½ lb ..	20	Baird & Peters, St. John, N.B.
"	11	" ..	39562 Moores Bros., Campbellton, N.B.	3 pks.	30	The F. F. Dalley Co., Ltd., Hamilton.

\* Lost in transit.



SESSIONAL PAPER No. 14  
PEPPER.

RESULTS OF ANALYSIS.					No. of Sample.	Remarks and opinion of the Chief Analyst.	
Inspector's Report. (Is not an expression of opinion).	Water Soluble.	Ash per cent.					Microscopical Examination.
		Total.	Soluble in Hydrochloric Acid.	Insoluble in Hydrochloric Acid (Sand).			

R. J. WAUGH, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.		
.....		0.90	.....	.....	Pepper tissues only.....	41826 Genuine.
.....		1.06	.....	.....	" .....	41827 "
.....		1.64	.....	.....	" .....	41828 "
.....		1.14	.....	.....	" .....	41829 "
.....		1.00	.....	.....	" .....	41830 "
.....		0.96	.....	.....	" .....	41831 "
.....		1.00	.....	.....	" .....	41832 "
.....		1.66	.....	.....	About 35 per cent wheat flour present.	41833 Adulterated.
.....		1.26	.....	.....	Pepper tissues only.....	41834 Genuine.
.....		1.04	.....	.....	Trace of wheat starch present	41835 Doubtful.

J. C. FERGUSON, INSPECTOR.

'Acorn' brand .....	0.66	.....	.....	Pepper tissues only.....	39553 Genuine.
.....	1.00	.....	.....	" .....	39554 "
.....	0.80	.....	.....	" .....	39555 "
Labelled absolutely pure white pepper.	2.06	.....	.....	" .....	39556 "
" .....	1.46	.....	.....	" .....	39557 "
.....	*	.....	.....	.....	39558
'Pyramid' brand .....	4.90	.....	.....	Pepper tissues only. ....	39559 Genuine.
Guaranteed absolutely pure. Mott's strictly pure white pepper.	1.10	.....	.....	" .....	39560 "
.....	1.04	.....	.....	" .....	39561 "
Dalley's pure ground white pepper.	1.10	.....	.....	" .....	39562 "



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF QUEBEC—

1909.						
Sept.	9 White Pepper..	36622	N. Ferron, St. Paulin . . . . .	½ lb ..	13	Chevalier & Pouliot, Joliette.
"	9	36623	S. Guimond, St. Paulin.....	½ " ..	18	" " . . . . .
"	9	36624	Thos. Juneau, St. Paulin.....	½ " ..	13	Chaput fils & Cie, Montreal..
"	9	36625	A. J. Thibaudeau, St. Paulin..	½ " ..	18	Hudon & Aslin, Montreal....
"	9	36626	H. Abram, St. Paulin.....	½ " ..	15	.....
"	9	36627	S. Vaillat, St. Paulin.. . . .	½ " ..	20	Hudon & Hebert, Montreal..
"	9	36628	A. Tramblay, St. Alexis . . . . .	½ " ..	20	.....
"	9	36629	Andre Dho, St. Alexis.....	½ " ..	20	L. Chaput fils & Co., Montreal
"	9	36630	J. V. Milot, St. Alexis.... .	½ " ..	20	" " . . . . .
"	9	36631	A. Robert, St. Alexis.....	½ " ..	20	" " . . . . .

DISTRICT OF ST. HYACINTHE—

Sept.	15 White Pepper ..	1217	J. V. Montplaisir, Drummond-ville.	3 pks.	25	The Brodies Mfg. Co., Montreal.
"	15	1218	Ant. Chicoine, Actonville. . . . .	½ lb ..	18	Unknown . . . . .
"	16	1219	J. S. McGuire, Waterloo. . . . .	½ " ..	15	" . . . . .
"	17	1220	F. X. Giroux, Farnham. . . . .	½ " ..	15	Herron Leblanc, Ltd . . . . .
"	17	1221	Gervais & freres, St. Jean.....	½ " ..	15	Banqueroute de Bechard, de L'Acadia.
"	22	1222	E. Huard, Lac Megantic.....	½ " ..	17	L. Chaput fils & Co., Montreal.
"	22	1223	P. A. Barberon, Cookshire. . . . .	½ " ..	13	Unknown . . . . .
"	23	1224	T. M. Bachelder & Co., Magog . . . . .	½ " ..	15	" . . . . .
"	24	1225	B. J. Smith, Coaticook . . . . .	½ " ..	20	Herron, Leblanc, Montreal..
"	24	1226	Theriault & Leclerc, Sherbrooke.	½ " ..	20	C. H. Cochrane & Co., Ottawa

DISTRICT OF MONTREAL—

Sept.	7 White Pepper ..	40326	A. Charlebois, Valleyfield.....	½ lb ..	20	Hudon & Orsali, Montreal...
"	10	40327	Paquette et freres, Berthierville	½ " ..	20	.....
"	14	40328	P. L. Michaud, St. Gabriel de Brandon.	½ " ..	13	Wolf, Sayer & Heller, Montreal.



SESSIONAL PAPER No. 14

## PEPPER.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.					No. of Sample.	Remarks and opinion of the Chief Analyst.
	Water Soluble.	Ash per cent.			Microscopical Examination.		
		Total.	Soluble in Hydrochloric Acid.	Insoluble in Hydrochloric Acid (Sand).			
E. BELAND, INSPECTOR.							
	p. c.	p. c.	p. c.	p. c.			
.....	8.86	8.16	0.70	Trace of wheat starch present	36622	Ash high. Adul- terated.	
.....	1.74	.....	.....	Pepper tissues only.....	36623	Genuine.	
.....	4.70	.....	.....	" .....	36624	Apparently a blk pepper. Genuine	
.....	2.36	.....	.....	" .....	36625	Genuine.	
.....	1.80	.....	.....	About 25 per cent wheat flour with a little maize.	36626	Adulterated.	
.....	2.40	.....	.....	About 20 per cent maize with some cayenne tissues.	36627	"	
.....	2.00	.....	.....	About 30 per cent wheat and maize flour.	36628	"	
.....	1.10	.....	.....	Pepper tissues only.....	36629	Genuine.	
.....	1.00	.....	.....	" .....	36630	"	
.....	0.94	.....	.....	Trace of foreign starch present	36631	Doubtful.	
J. C. ROULEAU, INSPECTOR.							
.....	3.24	.....	.....	About 60 per cent wheat and maize flour. Perhaps cayenne.	1217	Adulterated.	
.....	0.92	.....	.....	Pepper tissues only.....	1218	Genuine.	
.....	1.10	.....	.....	" .....	1219	"	
.....	2.20	.....	.....	About 25 per cent wheat flour	1220	Adulterated.	
.....	2.24	.....	.....	Stone cells in excess. Probably from husks or cocoanut shells.	1221	"	
.....	1.00	.....	.....	Pepper tissues only.....	1222	Genuine.	
.....	1.70	.....	.....	Stone cells in excess. Probably from olive stones.	1223	Adulterated.	
.....	1.84	.....	.....	Pepper tissues only.....	1224	Genuine.	
.....	1.74	.....	.....	About 20 per cent wheat flour	1225	Adulterated.	
Pure white pepper .....	1.04	.....	.....	Pepper tissues only.	1226	Genuine.	
J. J. COSTIGAN, INSPECTOR.							
Pure ground white pep- per.	1.64	.....	.....	Pepper tissues only.	40326	Genuine.	
.....	0.78	.....	.....	" .....	40327	"	
.....	1.30	.....	.....	" .....	40328	"	



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF MONTREAL—

1909.						
Sept. 22	White Pepper ..	40329	Z. Jacques, Terrebonne. ....	½ lb ..	16	Kearney Bros., Montreal....
" 16	" ..	40330	A. Chalmers, Huntingdon.....	½ " ..	18	Pure Gold Co.....
" 21	" ..	40331	Arthur Roy, Longueuil.....	½ " ..	20	Dom. Spice Co. ....
" 22	" ..	40332	Jos. Landry, 682 St. James St., Montreal.	½ " ..	18	Laporte, Martin & Co., Ltd..
" 26	" ..	40333	D. A. Duclos, St. Rose, P.Q..	½ " ..	20	L. Chaput fils & Cie ....
" 29	" ..	40334	W. Chatrand, St. Rose, P.Q..	½ " ..	18	.....
" 20	" ..	40335	The European Tea and Coffee Co., St. Rose, P Q.	½ " ..	15	Unknown.. ....

DISTRICT OF OTTAWA—

Sept. 22	White Pepper ..	42801	Cameron & Downing, Vankleek Hill	½ lb ..	20	Pure Gold Mfg. Co., Ltd., Toronto.
" 24	" ..	42802	J. E. Cook, Winchester.....	½ " ..	20	Unknown....
" 25	" ..	42803	J. T. Conway, Perth.....	½ " ..	20	Pure Gold Mfg. Co., Ltd., Toronto.
" 27	" ..	42804	A. Villeneuve, Gatineau Point.	½ " ..	20	Unknown....
" 28	" ..	42805	Miss Bennett, Spencerville....	½ " ..	17	" ..
" 29	" ..	42806	D. J. McDonald, Alexandria..	½ " ..	20	" ..
Oct. 4	" ..	42807	A. S. Russell, Galeota. ....	½ " ..	20	Jas. Turner & Co., Hamilton
" 4	" ..	42808	D. B. Eastman, Kinburn.....	½ " ..	20	White Swan Co., Toronto. ..
" 5	" ..	42809	Mrs. W. Alexander, Ottawa...	½ " ..	20	H. N. Bate & Sons, Ottawa..
" 5	" ..	42810	J. Polowin, Ottawa.....	½ " ..	20	" ..

DISTRICT OF KINGSTON

Sept. 7	White Pepper ..	42716	H. M. Stover, Kingston.....	½ lb ..	20	Maclean, Kingston. ....
" 7	" ..	42717	C. S. Litton, Kingston.....	½ " ..	20	Cochrane, Ottawa....
" 7	" ..	42718	J. Cullan, Kingston.....	½ " ..	20	Unknown.....
" 7	" ..	42719	C. Saunders, Kingston.....	½ " ..	20	" ..
" 7	" ..	42720	C. Pickering, Kingston ....	½ " ..	20	Lowes, Toronto.....
" 7	" ..	42721	Anderson Bros., Kingston. ...	½ " ..	20	Hamilton Spice and Coffee Co., Hamilton.



SESSIONAL PAPER No. 14

PEPPER.

RESULTS OF ANALYSIS.						
Inspector's Report. (Is not an expsession of opinion).	Ash per cent.				Microsopical Examination.	Remarks and opinion of the Chief Analyst.
	Water Soluble.	Total.	Soluble in Hydrochloric Acid.	Insoluble in Hydrochloric Acid (Sand).		
						No. of Sample.

J. J. COSTIGAN, INSPECTOR—Concluded.

	p. c.	p. c.	p. c.	p. c.		
.....		1.04			Trace of foreign starch present.	40329 Doubtful.
.....		1.10			Pepper tissues only.....	40330 Genuine.
.....		1.56			Trace of foreign starch present.	40331 Doubtful.
.....		1.26			Pepper tissues only.....	40332 Genuine.
.....		0.88			" .....	40333 "
.....		0.96			" .....	40334 "
.....		1.36			About 25 per cent buckwheat flour.	40335 Adulterated.

J. A. RICKEY, INSPECTOR.

.....		0.84			About 5 per cent wheat flour present.	42801 Doubtful.
.....		0.90			Pepper tissues only.....	42802 Genuine.
.....		1.30			Trace of foreign starch present.	42803 Doubtful.
.....		1.58			About 50 per cent wheat flour. Starch granules deformed.	42804 Adulterated.
.....		1.10			Pepper tissues only.....	42805 Genuine.
.....		1.70			About 30 per cent maize and wheat flour.	42806 Adulterated.
.....		1.74			Pepper tissues only.....	42807 Genuine.
.....		0.90			" .....	42808 "
.....		1.42			About 20 per cent wheat flour.	42809 Adulterated.
.....		1.00			Trace of wheat starch present	42810 Doubtful.

JAS. HOGAN, INSPECTOR.

.....		1.02			Pepper tissues only.....	42716 Genuine.
.....		1.20			" .....	42717 "
.....		1.34			About 15 per cent wheat flour	42718 Adulterated.
.....		1.04			About 25 per cent wheat flour	42719 "
.....		1.04			Pepper tissues only.....	42720 Genuine.
.....		1.66			" .....	42721 "



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	
DISTRICT OF KINGSTON—						
1909.						
Sept. 7	White Pepper ..	42722	E. S. Suddard, Kingston. ....	½ lb ..	20	Unknown.....
" 7	" ..	42723	Kirk & Lee, Kingston.....	½ " ..	20	McLaren's, Hamilton .....
" 8	" ..	42724	S. Fourt, Port Hope .....	½ " ..	20	Red Feather .....
" 8	" ..	42725	F. Rosevear, Port Hope.....	½ " ..	20	Lowes, Toronto. ....
DISTRICT OF TORONTO—						
Sept. 13	White Pepper..	41362	Mrs. Condy, Markham.....	½ lb..	20	G. S. Dunn Co., Hamilton..
" 14	" ..	41363	Gideon Vernor, Uxbridge.....	½ " ..	20	Unknown.....
" 14	" ..	41364	Allan & Fulton, Beaverton....	½ " ..	20	McLaren's, Ltd., Hamilton..
" 15	" ..	41365	Miss A. Robertson, Orillia....	½ " ..	20	White Swan Spices & Cereals Ltd., Toronto.
" 16	" ..	41366	J. C. McMurty, Midland.....	½ " ..	20	Jas. Turner & Co., Hamilton
" 16	" ..	41367	N. Belcourt, Penetang.....	½ " ..	20	H. P. Echardt & Co., Toronto
" 17	" ..	41368	C. G. Strange, Barrie .....	½ " ..	20	Unknown.....
" 17	" ..	41369	R. F. Green & Son, Bradford..	½ " ..	20	The White Swan Spices & Cereals, Ltd., Toronto.
" 25	" ..	41370	C. Fitzpatrick, Toronto. ....	½ " ..	20	W. Dawson.....
" 25	" ..	41371	J. Delaney, Toronto.....	½ " ..	20	G. S. Dunn & Co., Hamilton
DISTRICT OF LONDON—						
Sept. 13	White Pepper ..	30816	W. R. Butcher, St. Mary's....	½ lb..	20	Todhunter & Mitchell, To ronto.
" 15	" ..	30828	R. S. Jones, Stratford.....	½ " ..	20	F. F. Dalley Co., Ltd., Ham ilton.
" 15	" ..	30831	Wm. Stoneman, Mitchell....	½ " ..	20	Unknown.....
" 16	" ..	30837	Chas. S. Andrews, Seaforth....	½ " ..	20	Geo. Watt & Sons, Brantford
" 16	" ..	30840	Matt. Williams, Seaforth.....	½ " ..	25	Unknown.....
" 20	" ..	30843	Peter Anderson, Guelph ....	½ " ..	25	J. M. Lowes, Toronto.....
" 20	" ..	30846	Chas. Ewing, Goderich....	½ " ..	20	Canada Spice & Grocery Co. London, Ont.
" 21	" ..	30851	J. J. McEwin, Goderich .....	½ " ..	20	Gorman & Eckert, London Ont.
" 22	" ..	30859	Kerr & Bird, Wingham. ....	½ " ..	20	" ..
" 27	" ..	30863	Geo. Williams, Guelph.. ...	½ " ..	20	Balfour Smye & Co., Hamil ton.



SESSIONAL PAPER No. 14

PEPPER.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.				No. Sample.	Remarks and opinion of the Chief Analyst.	
	Water Soluble.	Ash per cent.					Microscopical Examination.
		Total.	Soluble in Hydrochloric Acid.	Insoluble in Hydrochloric Acid (Sand).			

JAS HOGAN, INSPECTOR—*Concluded.*

	p. c.	p. c.	p. c.	p. c.		
.....		1.24	.....	.....	About 50 per cent wheat flour	42722 Adulterated.
.....		1.08	.....	.....	Pepper tissues only.....	42723 Genuine.
.....		1.80	.....	.....	" .....	42724 "
.....		0.74	.....	.....	" .....	42725 "

H. J. DAGER, INSPECTOR.

'Bison' Brand .....	1.24	.....	.....	About 30 per cent wheat flour	41362	Adulterated.
Pure white pepper.. ..	2.40	.....	.....	About 15 per cent buckwheat flour.	41363	"
Labelled white pepper.. ..	1.04	.....	.....	Pepper tissues only. ....	41364	Genuine.
" " .....	1.04	.....	.....	" " .....	41365	"
'Majestic' Brand. Guaranteed absolutely pure.	1.48	.....	.....	" " .....	41366	"
Pure ground spice. Spe- cial white pepper pure	1.34	.....	.....	" " .....	41367	"
Pure white pepper.....	1.28	.....	.....	About 15 per cent wheat flour	41368	Adulterated.
Sample sold as white pepper.	1.00	.....	.....	Trace of wheat flour present..	41369	Doubtful.
'Bison' Brand...	2.06	.....	.....	Trace of wheat starch..	41370	"
.....	1.20	.....	.....	About 5 per cent wheat flour	41371	"

T. KIDD, INSPECTOR.

.....	0.80	.....	.....	Pepper tissues only.....	30816	Genuine.
.....	1.02	.....	.....	" " .....	30828	"
.....	0.96	.....	.....	About 10 per cent wheat starch.	30831	Adulterated.
.....	0.90	.....	.....	Pepper tissues only .....	30837	Genuine.
.....	1.04	.....	.....	" " .....	30840	"
.....	1.00	.....	.....	" " .....	30843	"
.....	2.48	.....	.....	" " .....	30846	"
.....	0.94	.....	.....	" " .....	30851	"
.....	1.00	.....	.....	" " .....	30859	"
.....	1.96	.....	.....	" " .....	30863	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF WINDSOR—

1909.						
Oct.	4 White Pepper ..	42603	Alfred Deloge, Chatham...	½ lb..	20	F. F. Dalley Co., Ltd., Hamilton.
"	4 " ..	42608	E. R. Snook, Chatham.....	½ " .	20	Unknown... ..
"	5 " ..	42613	H. Johnson, Walkerville..	½ " .	20	Dalton Bros., Toronto
"	5 " ..	42618	Chas. Macfarlane, Walkerville	½ " .	20	Unknown... ..
"	5 " ..	42620	Wm. Rockett, Walkerville....	½ " .	10	" .....
"	5 " ..	42623	Fielding & Campeau, Windsor.	½ " .	18	Canada Spice & Grocery Co., London.
"	6 " ..	42628	J. D. Sovie, Essex... ..	½ " .	15	Unknown... ..
"	6 " ..	42630	C. P. Powell, Essex.....	½ " .	20	Gorman Eckert & Co., London.
"	7 " ..	42634	E. Quick, Kingsville.....	½ " .	20	Unknown.....
"	7 " ..	42640	J. J. Foster, Leamington.....	½ " .	15	Imperial Spice Co., Hamilton

DISTRICT OF MANITOBA--

Sept.	16 " ..	39786	Wm. Mowat, Cypress River...	12 oz.	30	Campbell Bros., Wilson Winnipeg & Regina.
"	16 " ..	39787	H. Indridason & Co., Cypress River.	¾ lb..	25	The Jobin Marrin Co., Ltd., Winnipeg & Regina.
"	17 " ..	39788	H. S. Shilson, Roland.....	¾ " .	20	Unknown.....
"	21 " ..	39789	The White City Grocery, P. Palsky, Mgr., Brandon.	½ " .	20	The Codvill Co., Brandon....
"	21 " ..	39790	W. Dowling & Co., Brandon..	½ " .	25	Unknown .. ..
"	21 " ..	39791	The A. E. Hill Co., Ltd., Griswold.	½ " .	20	" .....
"	21 " ..	39792	Garth Bros., Griswold ..	¾ " .	20	" .....
"	22 " ..	39793	J. G. Hindson, Rapid City...	½ " .	20	McLaren Ltd., Hamilton ...
"	28 " ..	39794	The Allison Macdonald Co., Baldur.	3 pks.	25	Unknown .. ..
"	28 " ..	39795	R. Rollins & Sons, Baldur ....	½ lb...	25	Gold Standard Mfg. Co., Winnipeg.



SESSIONAL PAPER No. 14

PEPPER.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and opinion of the Chief Analyst.
	Water Soluble.	Ash per cent.		Microscopical Examination.		
		Total.	Soluble in Hydrochloric Acid.			

JNO. TALBOT, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.		
Labelled pure white pep- per.	0.94	.....	.....	.....	Pepper tissues only .. . . .	42603 Genuine.
.....	1.04	.....	.....	.....	" " .. . . .	42608 "
Labelled Dalton's Extra select spices. White Pepper.	1.20	.....	.....	.....	About 10 per cent wheat starch.	42613 Adulterated.
.....	1.00	.....	.....	.....	Pepper tissues only.....	42618 Genuine.
Vendor said he would not guarantee as pure.	10.08	.....	.....	.....	About 25 per cent wheat flour and some undetermined for- eign matter apparently a Black Pepper.	42620 Adulterated ap- parently a black Pepper.
.....	1.08	.....	.....	.....	Pepper tissues only.....	42623 Genuine.
.....	1.10	.....	.....	.....	" " .. . . .	42628 "
.....	0.76	.....	.....	.....	" " .. . . .	42630 "
.....	1.04	.....	.....	.....	" " .. . . .	42634 "
'Majestic' Brand. Pure white pepper. Guarant- eed absolutely pure.	2.14	.....	.....	.....	" " .. . . .	42640 "

A. C. LARIVIERE, INSPECTOR:

'Royal Shield' Brand. White Pepper.	1.14	.....	.....	.....	Pepper tissues only.....	39786 Genuine.
'Challenger' Brand. Pure spices. White pepper	0.94	.....	.....	.....	" " .. . . .	39787 "
.....	1.00	.....	.....	.....	" " .. . . .	39788 "
.....	1.14	.....	.....	.....	" " .. . . .	39789 "
.....	1.76	.....	.....	.....	" " .. . . .	39790 "
.....	1.44	.....	.....	.....	" " .. . . .	39791 "
.....	1.04	.....	.....	.....	" " .. . . .	39792 "
.....	1.04	.....	.....	.....	" " .. . . .	39793 "
.....	1.24	.....	.....	.....	" " .. . . .	39794 "
'Gold Standard' pure ground white pepper.	1.08	.....	.....	.....	" " .. . . .	39795 "



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF CALGARY—

1909.						
Sept. 10	White Pepper...	35602	Bentley Co., Lethbridge .....	3 pkgs	45	A. Schilling & Co., San Francisco.
" 10	" ..	35603	Bradbur & Co., Lethbridge....	3 tins.	45	Pure Gold Mfg. Co., Ltd., Toronto.
" 11	" ..	35604	L. B. Cochrane, Med. Hat....	3 "	30	Gold Standard Mfg. Co., Winnipeg.
" 11	" ..	35605	Spencer & Todd, Med. Hat....	3 pkgs	25	Codville & Co., Winnipeg....
" 11	" ..	35606	H. W. Ireland & Co., Med. Hat	3 "	25	McLaren's Ltd., Hamilton..
" 11	" ..	35607	R. Dunn, Med. Hat.....	3 "	20	Georgeson & Co., Ltd., Calgary.
Oct. 7	" ..	35608	Acme Co., Edmonton.....	3 "	45	R. Craig & Co., Ltd., Toronto
" 7	" ..	35609	Gariepy & Lessard, Edmonton.	3 "	30	Blue Ribbon Ltd., Winnipeg
" 7	" ..	35610	Hallier & Aldridge, Edmonton	3 "	45	Balfour & Co., Hamilton....
" 9	" ..	35611	J. H. Morris & Co., Edmonton	3 "	40	White Star Mfg. Co., Winnipeg.

DISTRICT OF VANCOUVER—

Sept. 14	White Pepper...	37726	Foran Bros., Vancouver. ....	3 tins.	30	Braid & Co., Vancouver.....
" 14	" ..	37727	West End Grocery, New Westminster.	½ lb..	30	W. H. Malkin & Co., Vancouver.
" 14	" ..	37728	Joe. Quoy, New Westminster..	3 tins.	30	Oriental Mills, Vancouver...
" 14	" ..	37729	C. B. Deans, New Westminster	3 "	30	E. R. Durke, New York ....
" 15	" ..	37730	A. R. Stacy, North Vancouver	3 "	30	Empress Mfg. Co., Vancouver
" 15	" ..	37731	Welcome Parlors, North Vancouver.	3 "	30	Kelly Douglas & Co., Vancouver.
" 18	" ..	37732	Pioneer Grocery, Vancouver...	½ lb..	30	Empress Mfg. Co., Vancouver
" 18	" ..	37733	A. M. Tolson, Vancouver...	½ "	20	Kelly Douglas & Co., Vancouver.
" 18	" ..	37734	R. Mitchell, Vancouver.....	3 tins.	30	Hudson's Bay Co., Vancouver
" 18	" ..	37735	W. J. McMillan & Co., Vancouver.	3 "	30	W. J. McMillan & Co., Vancouver.

DISTRICT OF VICTORIA

Oct. 14	White Pepper ..	41549	Windsor Grocery Co., Victoria, B.C.	3 pkgs	30	Pioneer Coffee & Spice Mills Ltd., Victoria, B.C.
" 15	" ..	41550	The West End Grocery Co., Ltd., Victoria, B.C.	3 "	30	R. P. Rithet & Co., Ltd Victoria, B.C.
" 15	" ..	41551	Copas & Young, Victoria, B.C.	3 "	30	J. Braid & Co., Vancouver.



## SESSIONAL PAPER No. 14

## PEPPER.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.				Microscopical Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
	Ash per cent.						
	Water Soluble.	Total.	Soluble in Hydrochloric Acid.	Insoluble in Hydrochloric Acid (Sand).			

R. W. FLETCHER, INSPECTOR.						
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## R. W. FLETCHER, INSPECTOR.

	p.c.	p.c.	p.c.	p.c.		
.....		0.90	.....	.....	Pepper tissues only.....	35602 Genuine.
.....		0.86	.....	.....	"	35603 "
.....		1.10	.....	.....	"	35604 "
.....		1.22	.....	.....	"	35605 "
.....		1.04	.....	.....	"	35606 "
.....		3.04	.....	.....	"	35607 "
.....		1.04	.....	.....	About 15 per cent wheat flour	35608 Adulterated.
.....		1.00	.....	.....	Pepper tissues only.....	35609 Genuine.
.....		1.44	.....	.....	"	35610 "
.....		1.00	.....	.....	"	35611 "

## J. F. POWER, INSPECTOR.

Guaranteed pure.....	1.04	.....	.....	Pepper tissues only.....	37726 Genuine.
Guaranteed absolutely pure.	0.80	.....	.....	"	37727 "
Guaranteed finest quality full strength.	0.90	.....	.....	"	37728 "
'Gauntlet' brand guaranteed full strength	1.39	.....	.....	"	37729 "
'Empress' brand full strength.	1.16	.....	.....	"	37730 "
'Columbia' brand guar- anteed full strength.	1.00	.....	.....	"	37731 "
Full strength, always reliable.	0.92	.....	.....	Trace of white starch present	37732 Doubtful.
.....	1.16	.....	.....	Pepper tissues only..	37733 Genuine.
'Imperial brand,' full strength.	0.90	.....	.....	"	37734 "
'Monarch' brand, full strength.	1.04	.....	.....	"	37735 "

## D. O'SULLIVAN, INSPECTOR.

'Empire'...	0.98	.....	.....	Pepper tissues only..	41549 Genuine.
'St. James'.....	1.08	.....	.....	"	41550 "
Guaranteed pure.....	1.10	.....	.....	"	41551 "



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF VICTORIA—

1909.						
Oct.	15	White Pepper ..	41552 J. W. Speed, Victoria, B.C....	½ lb ..	20	Todhunter Mitchell & Co., Toronto.
"	15	" ..	41553 Saunders Grocery Co., Ltd., Victoria, B.C.	½ " ..	20	J. Braid & Co., Vancouver..
"	15	" ..	41554 Wm. B. Hall, Victoria, B.C...	½ " ..	20	Oriental Mills, Vancouver...
"	16	" ..	41555 Harrison & McDonald, Vic- toria, B.C.	3 pkgs	45	A. Shilling & Co., San Fran- cisco, Cal.
"	16	" ..	41556 W. A. Jameson, Victoria, B.C.	3 " ..	30	F. F. Dalley Co., Ltd., Hamilton, Ont.
"	18	" ..	41557 L. Dickinson, Victoria, B.C...	3 " ..	30	E. R. Durkee & Co., New York, U.S.A.
"	18	" ..	41558 Bailey, Victoria, B.C.....	3 " ..	30	Empress Mfg. Co., Van- couver, B.C.



SESSIONAL PAPER No. 14

PEPPER.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.				Microscopical Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
	Water Soluble.	Ash per cent.					
		Total.	Soluble in Hydrochloric Acid.	Insoluble in Hydrochloric Acid (Sand).			

D. O'SULLIVAN, INSPECTOR—*Concluded.*

	p. c.	p. c.	p. c.	p. c.			
Labelled Todhunter pure white pepper.	.....	1·10	.....	.....	Pepper tissues only.....	41552	Genuine
.....	.....	0·90	.....	.....	" .....	41553	"
.....	.....	1·00	.....	.....	" .....	41554	"
'Shillings Best' white pepper.	.....	0·96	.....	.....	" .....	41555	"
'Victoria' pure white pepper.	.....	1·26	.....	.....	" .....	41556	"
'Gauntlet' white pepper.	.....	0·96	.....	.....	" .....	41557	"
'Empress' white pepper.	.....	1·06	.....	.....	" .....	41558	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF NOVA SCOTIA—

1909.						
Oct.	5 Black Pepper...	41816	T. J. Brown, Halifax, N.S....	3 pkgs	15	Jno. P. Mott & Co., Halifax, N.S.
"	5 "	41817	A. J. Finlay, Halifax, N.S....	"	15	W. H. Schwartz & Sons, Halifax, N.S.
"	5 "	41818	City Provision Store, Halifax, N.S.	"	15	" " ..
"	6 "	41819	John P. Mott & Co., Halifax, N.S.	"	..	Vendors. ....
"	6 "	41820	Shore & Campbell, Halifax, N.S.	"	30	C. H. Cochrane & Co., Ottawa
"	8 "	41821	S. L. Cross, Kentville, N.S....	"	30	Nat. Drug Co., Halifax, N.S.
"	11 "	41822	W. B. Calhoun, Amherst, N.S.	8 ozs.	15	Todhunter & Mitchell, Toronto.
"	11 "	41823	Moffatt Bros., Amherst, N.S..	3 pkgs	30	Dearborn & Co., St. John, N.B.
"	12 "	41824	H. W. Ryan & Co., Truro, N.S.	"	21	National Drug Co., Halifax, N.S.
"	12 "	41825	Angus & Pollock, Truro, N.S	"	27	Jno. P. Mott & Co., Halifax, N.S.

DISTRICT OF NEW BRUNSWICK—

Sept.	8 Black Pepper...	39563	G. E. Barbour Co., Ltd., St. John, N.B.	$\frac{1}{2}$ lb.	10	Vendors.....
"	14 "	39564	H. G. McBeath, St. John, N.B.	"	14	G. S. Deforests Sons Co., Ltd., St. John, N.B.
"	21 "	39565	John McKnight, Fredericton, N.B.	"	13	G. E. Barbour Co., Ltd., St. John, N.B.
"	22 "	39566	The John Graham Estate, Woodstock, N.B.	"	18	Todhunter & Mitchell, Toronto.
"	23 "	39567	B. Beveridge, Andover, N.B..	3 pkgs	30	Jones & Schofield, St. John, N.B.
"	24 "	39568	F. D. Sadler, Perth, N.B.....	"	30	A. F. Randolph & Son, Fredericton, N.B.
Oct.	7 "	39569	J. D. Paulin, Newcastle....	"	30	Dearborn & Co., St. John, N.B.
"	7 "	39570	Mrs. S. A. Demers, Newcastle	"	30	H. W. Cole, Ltd., St. John, N.B.
"	9 "	39571	W. J. Kent & Co., Bathurst, N.B.	"	24	" " ..
"	11 "	39572	E. J. Allingham, Campbellton, N.B.	"	30	Band & Peters, St. John, N.B.

DISTRICT OF QUEBEC—

Sept.	9 Black Pepper...	36632	W. Duhaime, St. Paulin.....	$\frac{1}{2}$ lb.	10	L. Chaput, Fils et Cie, Mon-treal.
"	"	36633	A. Blais, St. Paulin.. ..	"	10	" " ..
"	9 "	36634	N. Ferron, St. Paulin. ....	"	10	" " ..
"	"	36635	J. S. Hogue, St. Paulin.....	"	13	" " ..



## SESSIONAL PAPER No. 14

## PEPPER.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.					Remarks and opinion of the Chief Analyst
	Ash per cent.					
	Water Soluble.	Total.	Soluble in Hydrochloric acid.	Insoluble in Hydrochloric Acid (Sand).	Microscopical Examination.	

## R. J. WAUGH, INSPECTOR.

	p.c.	p.c.	p.c.	p.c.		
Labelled Pure .....		5.94	.....	.....	Pepper tissues only.....	41816 Genuine.
" .....		6.08	.....	.....	" " .....	41817 "
" .....		5.40	.....	.....	Trace of leguminous starch..	41818 Doubtful.
" .....		4.40	.....	.....	Pepper tissues only. ....	41819 Genuine.
" .....		4.00	.....	.....	" " .....	41820 "
" .....		4.94	.....	.....	" " .....	41821 "
" .....		4.10	.....	.....	" " .....	41822 "
Labelled Pure.....		6.54	.....	.....	" " .....	41823 "
" .....		4.38	.....	.....	" " .....	41824 "
" .....		4.58	.....	.....	" " .....	41825 "

## J. C. FERGUSON, INSPECTOR.

'Acorn' Brand .....	5.50	.....	.....	Pepper tissues only.....	39563	Genuine.
" .....	5.08	.....	.....	" " .....	39564	"
" .....	5.70	.....	.....	" " .....	39565	"
" .....	4.50	.....	.....	" " .....	39566	"
Pure Black Pepper. ....	3.94	.....	.....	Trace of wheat flour present.	39567	Doubtful.
" .....	3.92	.....	.....	About 5 per cent of wheat starch (flour).	39568	"
'Perfection' Brand, ab- solutely pure. ....	10.64	5.06	5.58	Pepper tissues only.....	39569	Ash high. Adul- terated.
'Thistle' Brand .....	5.34	.....	.....	" " .....	39570	Genuine.
" .....	5.34	.....	.....	" " .....	39571	"
'Reindeer' Brand .....	4.60	.....	.....	" " .....	39572	"

## E. BELAND, INSPECTOR.

.....	4.68	.....	.....	Pepper tissues only.....	36632	Genuine.
.....	5.60	.....	.....	Trace of wheat flour present.	36633	Doubtful.
.....	4.60	.....	.....	Pepper tissues only.....	36634	Genuine.
.....	4.18	.....	.....	" " .....	36635	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	
DISTRICT OF QUEBEC—						
1909.						
Sept. 9	Black Pepper...	36636	S. Guimond, St. Paulin.....	½ lb	10	Chevalier & Pouliot, Montreal.
" 9	" ..	36637	H. Abram, St. Paulin .....	"	12	.....
" 9	" ..	36638	St. Vaillet, St. Paulin .....	"	10	Hudon, Hebert, Montreal...
" 9	" ..	36639	M. Dupuis, St. Paulin.....	"	10	L. Z. Magnam, Joliette. ...
" 9	" ..	36640	A. Duhaime, St. Paulin.....	"	10	Chevalier & Pouliot, Joliette
" 9	" ..	36641	H. Lemin, St. Paulin.....	"	10	Lecaille Gendron, Montreal.
DISTRICT OF ST. HYACINTHE						
Sept. 15	Black Pepper. ..	1228	S. L. Biron, Drummondville ..	½ lb..	20	Banqueroute de J.u. Lafond, Sorel.
" 15	" ..	1229	V. Gingras, Upton.....	½ " ..	10	Unknown.....
" 16	" ..	1230	Gilmore & Girard, Waterloo..	½ " ..	13	" .....
" 16	" ..	1231	H. F. Desmarais, Marieville ..	½ " ..	13	Hudon, Hebert et Cie.....
" 22	" ..	1232	J. O. McDonald, Lac Megantic ½	" ..	15	Whitead & Turner, Quebec..
" 22	" ..	1233	White & Wiggett, Lennoxville ½	" ..	13	Unknown .....
" 22	" ..	1234	McMurray & Hall, Lennoxville. ½	" ..	15	F. F. Dalley Co., Ltd., Hamilton.
" 23	" ..	1235	J. Halyon, Sherbrooke .....	3 pks.	30	Denault Grain & Prov. Co., Sherbrooke.
" 24	" ..	1236	S. W. Hadlock, Coaticooke....	½ lb..	15	H. H. Edwards, Sherbrooke .
" 24	" ..	1237	Hubert & Fortier, Sherbrooke E	½ " ..	15	Unknown. ....
DISTRICT OF MONTREAL—						
Sept. 7	Black Pepper. ..	40336	Primeau et frere, Valleyfield..	½ lb..	15	F. F. Dalley Co., Ltd., Hamilton.
10	" ..	40337	J. A. Laporte, Berthierville... ½	" ..	13	Vendor.....
14	" ..	40338	Louis Jacques, St. Gabriel de ½	" ..	20	" .....
15	" ..	40339	Edouard Briere, Terrebonne... ½	" ..	14	.....
16	" ..	40340	James Brown, Huntingdon....	3 tins.	30	White Swan Spices & Cereals Ltd., Toronto.
21	" ..	40341	P. Charron, Longueuil.....	½ lb..	10	Hudon, Hebert & Co., Montreal.
22	" ..	40342	Hutton Bros., 206 St. Antoine ½	" ..	15	.....
29	" ..	40343	J. A. Gravel, St. Rose .....	½ " ..	17	.....
29	" ..	40344	J. A. Joly, St. Rose.....	½ " .	12	The European Tea & Coffee Co., Montreal.
29	" ..	40345	N. Sirois, 32 Craig St., Montreal.	½ " ..	20	.....



SESSIONAL PAPER No. 14

## PEPPER.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.					No. of Sample.	Remarks and opinion of the Chief Analyst.
	Water Soluble.	Ash per cent.			Microscopical Examination.		
		Total.	Soluble in Hydrochloric Acid.	Insoluble in Hydrochloric Acid (Sand).			
E. BELAND, INSPECTOR— <i>Concluded.</i>							
.....		5.96			Pepper tissues only.....	36636	Genuine.
.....		10.50	3.86	6.64	About 15 per cent wheat flour.	36637	Ash high. Adul- terated.
.....		15.10	7.30	7.80	About 20 per cent wheat flour and cayenne tissues.	36638	" "
.....		7.36	4.78	2.58	Pepper tissues only.....	36639	" "
.....		9.00	4.20	4.80	About 20 per cent wheat flour	36640	" "
.....		5.20			Pepper tissues only.....	36641	Genuine.
J. C. ROULEAU, INSPECTOR.							
.....		4.84			Stone cells in excess. Prob- ably from cocoanut shells.	1228	Adulterated.
.....		16.16	5.00	11.16	About 25 per cent wheat flour	1229	Ash high. Adul- terated.
.....		4.92			Pepper tissues only.....	1230	Genuine.
.....		8.04	4.04	4.00	About 20 per cent maize flour	1231	Ash high. Adul- terated.
.....		6.24			Pepper tissues only.....	1232	Genuine.
.....		4.68			Trace of foreign starch.....	1233	Doubtful.
.....		4.38			Pepper tissues only.....	1234	Genuine.
Duchess.....		3.84			"	1235	"
.....		10.44	4.70	5.74	About 30 per cent wheat flour	1236	Ash high. Adul- terated.
.....		14.10	5.52	8.58	Trace of wheat starch present	1237	"
J. J. COSTIGAN, INSPECTOR.							
.....		4.80			Pepper tissues only.....	40336	Genuine.
.....		5.40			"	40337	"
.....		7.10			"	40338	Ash high. Doubt- ful.
.....		5.30			Trace of wheat flour present.	40339	Doubtful.
.....		5.24			About 10 per cent maize and wheat flour.	40340	Adulterated.
.....		7.20	3.80	3.40	Trace of wheat flour present.	40341	Ash high. Doubt- ful.
.....		10.88	6.32	4.56	Trace of wheat starch present	40342	Ash high. Adul- terated.
.....		11.54	4.64	6.90	About 30 per cent wheat flour	40343	"
.....		6.30	2.26	4.04	Trace of wheat flour present..	40344	Doubtful.
.....		19.70	5.70	14.00	Pepper tissues only.....	40345	Ash high. Adul- terated.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF OTTAWA

1909.						
Sept. 22	Black Pepper. . .	42811	C. S. Northcott, Vankleek Hill	$\frac{1}{2}$ lb . .	15	Unknown. . . . .
" 23	" . .	42812	C. A. Farmer, Perth. . . . .	$\frac{1}{2}$ " . .	15	Pure Gold Mfg. Co., Ltd., Toronto.
" 27	" . .	42813	P. Legault, Gatineau Point. . .	$\frac{1}{2}$ " . .	20	Unknown. . . . .
" 28	" . .	42814	H. R. Sawdon, Spencerville. . .	$\frac{1}{2}$ " . .	15	H. N. Bate & Sons, Ottawa..
" 29	" . .	42815	E. G. Campeau, Alexandria. . .	$\frac{1}{2}$ " . .	13	S. H. Ewing & Son, Montreal
Oct. 4	" . .	42816	A. S. Russell, Galetta. . . . .	$\frac{1}{2}$ " . .	15	Jas. Turner & Co., Hamilton.
" 4	" . .	42817	D. B. Eastman, Kinburn. . . . .	$\frac{1}{2}$ " . .	12	Turner & Co., Hamilton. . .
" 5	" . .	42818	Mitchell Bros., Ottawa. . . . .	$\frac{1}{2}$ " . .	20	C. H. Cochrane & Co., Ottawa.
" 5	" . .	42819	Miss Smith, Ottawa . . . . .	$\frac{1}{2}$ " . .	18	S. J. Major Ltd., Ottawa. . .
Sept. 24	" . .	42820	Kendrick & Summers, Winchester.	$\frac{1}{2}$ " . .	20	S. J. Carter & Co., Montreal

DISTRICT OF KINGSTON—

Sept. 7	Black Pepper. . .	42726	C. S. Litton, Kingston. . . . .	$\frac{1}{2}$ lb . .	20	H. Cochrane, Ottawa.
" 7	" . .	42727	C. Saunders, Kingston. . . . .	$\frac{1}{2}$ " . .	20	Gorman & Eckert, London, Ont.
" 7	" . .	42728	C. Pickering, Kingston. . . . .	$\frac{1}{2}$ " . .	15	Lowe, Toronto. . . . .
" 7	" . .	42729	Anderson Bros., Kingston. . .	$\frac{1}{2}$ " . .	20	Hamilton Spice & Coffee Co., Hamilton.
" 7	" . .	42730	E. S. Suddard, Kingston. . . . .	$\frac{1}{2}$ " . .	13	Greig, Toronto. . . . .
" 7	" . .	42731	Kirk & Lee, Kingston . . . . .	$\frac{1}{2}$ " . .	20	McLaren's, Hamilton. . .
" 7	" . .	42732	Keley Bros., Kingston. . . . .	$\frac{1}{2}$ " . .	15	Pure Gold, Toronto. . . . .
" 7	" . .	42733	Geo. Gibson, Kingston. . . . .	$\frac{1}{2}$ " . .	20	Lister Pure Food Co., Toronto.
" 8	" . .	42734	S. Fourt, Port Hope . . . . .	$\frac{1}{2}$ " . .	15	Red Feather. . . . .
" 8	" . .	42735	F. Rosevear, Port Hope . . . . .	$\frac{1}{2}$ " . .	15	Lowe's, Toronto. . . . .

DISTRICT OF TORONTO—

Sept. 13	Black Pepper. . .	41372	A. H. Zurbriggt, Markham. . .	$\frac{1}{2}$ lb . .	20	Unknown . . . . .
" 14	" . .	41373	A. MacPhail, Uxbridge. . . . .	$\frac{1}{2}$ " . .	15	G. S. Dunn & Co., Hamilton



SESSIONAL PAPER No. 14

## PEPPER.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.					No. of Sample.	Remarks and opinion of the Chief Analyst.
	Water Soluble.	Ash per cent.			Microscopical Examination.		
		Total.	Soluble in Hydrochloric Acid.	Insoluble in Hydrochloric Acid (Sand).			

J. A. RICKEY, INSPECTOR.

	p.c.	p.c.	p.c.	p.c.			
.....		5.16	.....	.....	Pepper tissues only.....	42811	Genuine.
.....		5.74	.....	.....	" .....	42812	"
.....		4.50	.....	.....	" .....	42813	"
.....		4.38	.....	.....	" .....	42814	"
.....		3.00	.....	.....	Trace of wheat flour present.	42815	Doubtful.
.....		3.74	.....	.....	Pepper tissues only.....	42816	Genuine.
.....		4.88	.....	.....	" .....	42817	"
.....		4.36	.....	.....	" .....	42818	"
.....		5.30	.....	.....	Trace of wheat starch present	42819	Doubtful.
.....		11.90	3.66	8.24	About 40 per cent wheat and maize.	42820	Ash high. Adul- terated.

JAS. HOGAN, INSPECTOR.

.....	4.58	.....	.....	Pepper tissues only.....	42726	Genuine.
.....	3.84	.....	.....	" .....	42727	"
.....	3.00	.....	.....	" .....	42728	"
.....	4.40	.....	.....	" .....	42729	"
.....	4.12	.....	.....	About 10 per cent of wheat and maize.	42730	Adulterated.
.....	4.64	.....	.....	Pepper tissues only.....	42731	Genuine.
.....	4.52	.....	.....	" .....	42732	"
.....	4.68	.....	.....	" .....	42733	"
.....	4.28	.....	.....	" .....	42734	"
.....	5.74	.....	.....	" .....	42735	"

H. J. DAGER, INSPECTOR.

'Bison' brand. Pure... ..	3.80	.....	.....	Pepper tissues only.....	41372	Genuine.
black pepper.	4.80	.....	.....	About 10 per cent wheat flour and slight excess of stone cells.	41373	Adulterated.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF TORONTO

1909.						
"	14 Black Pepper..	41374	Edwards Bros., Beaverton ....	$\frac{1}{2}$ " ..	13	Pure Gold Mfg. Co., Ltd., Toronto.
"	15 " ..	41375	John Wilson, Orillia.....	$\frac{1}{2}$ " ..	15	Unknown .....
"	16 " ..	41376	W. Johnson, Midland.....	$\frac{1}{2}$ " ..	15	Todhunter, Mitchell & Co., Toronto.
"	16 " ..	41377	H. C. Doersam, Penetang.....	$\frac{1}{2}$ " ..	20	Geo. Bristol, Hamilton.....
"	17 " ..	41378	E. A. Sibbald, Barrie ....	$\frac{1}{2}$ " ..	20	Lumsden Bros., Hamilton...
"	17 " ..	41379	M. J. Douglas, Bradford .....	$\frac{1}{2}$ " ..	15	The White Swan Spices and Cereals, Ltd., Toronto.
"	22 " ..	41380	Mrs. J. Lovejoy, Hamilton....	$\frac{1}{2}$ " ..	20	G. S. Dunn & Co., Hamilton.
"	22 " ..	41381	S. Nicholson, Hamilton.....	$\frac{1}{2}$ " ..	20	" " ..

DISTRICT OF LONDON—

Sept.	13 Black Pepper...	30817	Pickard & Fleming, St. Mary's	$\frac{1}{2}$ lb ..	13	Gorman & Eckert, London, Ont.
"	14 " ..	30824	Flaherty & Co., Stratford ..	$\frac{1}{2}$ " ..	15	McLaren's, Hamilton .
"	14 " ..	30825	Beaigh & Co., Stratford.....	$\frac{1}{2}$ " ..	15	Unknown .....
"	15 " ..	30830	J. H. Monteth, Stratford..	$\frac{1}{2}$ " ..	15	London Canning and Supply Co., London, Ont.
"	15 " ..	30833	C. J. Moore, Mitchell .....	$\frac{1}{2}$ " ..	15	Mayell & Co., Toronto ...
"	15 " ..	30835	Peter Dill, Dublin .....	$\frac{1}{2}$ " ..	20	F. F. Dalley Co., Ltd., Hamilton.
"	20 " ..	30844	J. A. McCrea, Guelph.....	$\frac{1}{2}$ " ..	15	Todhunter & Mitchell, Toronto.
"	21 " ..	30849	O. C. Whitely, Goderich.....	$\frac{1}{2}$ " ..	15	A. M. Smith, London.....
"	21 " ..	30853	Morrish & Venetteo, Goderich.	$\frac{1}{2}$ " ..	15	McEwing Bros., Goderich...
"	22 " ..	30855	Jas. Cutt, Blythe.....	$\frac{1}{2}$ " ..	13	F. F. Dalley Co., Ltd., Hamilton.

DISTRICT OF WINDSOR -

Oct.	4 Black Pepper...	42602	Jno. W. Dyer, Chatham.....	$\frac{1}{2}$ lb ..	15	Dunn & Co., Hamilton.....
"	4 " ..	42605	J. A. Mackiness, Chatham....	$\frac{1}{2}$ " ..	15	Gorman, Eckert & Co., London, Ont.
"	4 " ..	42607	C. G. Moore, Chatham.....	$\frac{1}{2}$ " ..	15	McLaren Spice Co., Hamilton
"	5 " ..	42614	T. W. Nairn, Walkerville.....	$\frac{1}{2}$ " ..	15	Todhunter & Mitchell, Toronto.



SESSIONAL PAPER No. 14

## PEPPER.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.					Remarks and opinion of the Chief Analyst.
	Water Soluble.	Ash per cent.			Microscopical Examination.	
		Total.	Soluble in Hydrochloric Acid.	Insoluble in Hydrochloric Acid (Sand).		
						No. of Sample.

H. J. DAGER, INSPECTOR—*Concluded.*

	p.c.	p.c.	p.c.	p.c.		
Absolutely pure black pepper.	4.58	...	...	...	Pepper tissues only.....	41374 Genuine.
Superfine pure black pepper.	3.80	...	...	...	About 15 per cent wheat and maize flour.	41375 Adulterated.
Pure black pepper.	4.50	...	...	...	Pepper tissues only..	41376 Genuine.
"	5.80	...	...	...	"	41377 "
"	4.08	...	...	...	Trace of wheat starch present	41378 Doubtful.
.....	4.90	...	...	...	Pepper tissues only.....	41879 Genuine.
.....	3.90	...	...	...	About 15 per cent wheat flour	41380 Adulterated.
Labelled black pepper..	3.90	...	...	...	About 10 per cent wheat flour	41381 "

T. KIDD, INSPECTOR.

.....	5.80	...	...	...	Pepper tissues only.....	30817 Genuine.
.....	4.26	...	...	...	"	30824 "
.....	4.60	...	...	...	Trace of wheat starch.....	30825 Doubtful.
.....	4.82	...	...	...	Pepper tissues only.....	30830 Genuine.
.....	4.48	...	...	...	"	30833 "
.....	4.36	...	...	...	"	30835 "
.....	5.14	...	...	...	"	30844 "
.....	5.62	...	...	...	"	30849 "
.....	5.34	...	...	...	"	30853 "
.....	4.16	...	...	...	"	30856 "

JNO. TALBOT, INSPECTOR.

Labelled pure black pepper.	3.64	.....	.....	.....	About 15 per cent wheat flour and some cocoanut shells.	42602 Adulterated.
'Forest' City pure spices.	3.26	.....	.....	.....	Pepper tissues only.....	42605 Genuine.
'Invincible' spices black pepper, ground pure from specially selected goods.	4.84	.....	.....	.....	"	42607 "
.....	4.28	.....	.....	.....	"	42614 "



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF WINDSOR—

1909.						
Sept. 5	Black Pepper...	42616	D. Pratt, Walkerville.....	½ lb .	13	Jno. Scott, Windsor.....
" 5	" .....	42617	O. Eastman, Walkerville.....	½ " ..	15	Imperial Spice Co., Hamilton
" 6	" .....	42629	A. Kaines, Essex.....	½ " ..	15	McLaren's, Hamilton.. .....
" 7	" .....	42633	G. C. Greives, Kingsville .....	½ " ..	15	Canada Spice and Grocery Co., London, Ont.
" 7	" .....	42635	A. Campbell, Leamington.....	1 " ..	20	" .....
" 7	" .....	42636	G. M. Sawyer, Leamington....	½ " ..	20	Gorman, Eckert & Co., London, Ont.

DISTRICT OF MANITOBA—

Sept. 15	Black Pepper...	39801	B. Loewen, Winkler.....	¾ lb ..	20	Gold Standard Mfg. Co., Winnipeg.
" 15	" .....	39802	Wyck & Krockner, Winkler...	¾ " ..	30	G. S. Dunn & Co., Hamilton.
" 15	" .....	39803	A. Harder, Plum Coulee.....	½ " ..	20	The Codville Co., Winnipeg.
" 15	" .....	39804	J. I. Bargaen, Plum Coulee....	1 " ..	30	Gorman, Eckert & Co., London and Winnipeg.
" 16	" .....	39805	Wm. Mowat, Cypress River.	6 oz ..	30	Foley Bros. Larson Co., Winnipeg, Edmonton and Vanc.
" 27	" .....	39806	J. H. Putnam, Dunrea.....	3 pks.	25	Gold Standard Mfg. Co., Winnipeg.
" 27	" .....	39807	Mrs. W. A. Seebach, Dunrea.	½ lb .	15	Gorman, Eckert & Co., London and Winnipeg.
" 28	" .....	39808	The Allison Macdonald Co., Baldur.	½ " ..	20	Unknown.
" 28	" .....	39809	Jas. Overend & Co., Ninette..	½ " ..	15	" .....
" 28	" .....	39810	John Yellowless, Ninette . . .	½ " ..	15	Gold Standard Mfg. Co., Winnipeg.

DISTRICT OF CALGARY—

Sept. 10	Black Pepper...	35612	Hudson Bay Co., Lethbridge..	3 pkgs	30	Hudson Bay Co., Winnipeg..
" 10	" .....	35613	Bentley & Co., Lethbridge....	"	30	Vendors.....
" 10	" .....	35614	Bradbur & Co., Lethbridge....	"	30	Gold Standard Co., Winnipeg
" 11	" .....	35615	Spencer & Todd, Medicine Hat	"	30	" .....
" 11	" .....	35616	H. W. Ireland Co., Medicine Hat.	"	20	McLarens Ltd., Hamilton...
" 11	" .....	35617	R. Dunn, Medicine Hat.....	"	20	Georgeson & Co., Calgary...



SESSIONAL PAPER No. 14

## PEPPER.

Inspectors's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.				Microscopical Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
	Water Soluble.	Ash per cent.					
		Total.	Soluble in Hydrochloric Acid.	Insoluble in Hydrochloric Acid (Sand).			

JNO. TALBOT, INSPECTOR—*Concluded.*

	p.c.	p.c.	p.c.	p.c.			
...		8.60	7.60	1.00	About 15 to 20 per cent of foreign starch, mostly wheat.	42616	Ash high. Adul- terated.
'Majestic,' guaranteed absolutely pure.		5.24			Pepper tissues only.	42617	Genuine.
The quintessence of purity and flavour.		4.80				42629	"
'Crest' brand pure spices.		4.84				42633	"
" " "		4.56				42635	"
'Forest' City pure spices.		1.40				42636	Is white pepper. Genuine.

A. C. LARIVIERE, INSPECTOR.

'Gold Standard' pure ground black pepper.	5.34			Pepper tissues only.	39801	Genuine.
'Red Cross' selected spices black pepper.	4.00			About 10 per cent wheat flour, cayenne tissue.	39802	Adulterated.
...	5.64			Pepper tissues only.	39803	Genuine.
'Forest City' pure black pepper.	0.96				39804	"
'Premier' brand spices pure black pepper.	5.08				39805	"
'Gold Standard' pure ground black pepper.	5.50				39806	"
'Forest City' pure spices pepper.	4.44				39807	"
...	4.40				39808	"
...	5.24				39809	"
...	5.60				39810	"

R. W. FLETCHER, INSPECTOR.

...	5.24			Pepper tissues only.	35612	Genuine.
...	4.48			" "	35613	"
...	5.08			" "	35614	"
...	5.48			" "	35615	"
...	5.00			" "	35616	"
...	5.00			" "	35617	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	
DISTRICT OF CALGARY—						
1909.						
Oct. 7	Black Pepper...	35618	Acme Co., Edmonton.....	3 pkgs	30	White Swan Spice Co., Ltd., Toronto.
" 7	" ..	35619	Gariepy & Lessard, Edmonton	"	30	Blue Ribbon, Ltd., Winnipeg
" 7	" ..	35620	Hallier & Aldridge, Edmonton	"	30	Balfour & Co., Hamilton....
" 7	" ..	35621	J. H. Morris & Co., Edmonton	"	30	White Star Mfg. Co., Winnipeg.
DISTRICT OF VANCOUVER—						
Sept. 14	Black Pepper...	37736	A. Gaudin, New Westminster.	3 tins	30	Wilson & Co., Victoria.....
" 14	" ..	37737	Geo. Adams, New Westminster	"	30	Kelly Douglas & Co., Vancouver.
" 15	" ..	37738	J. A. McMillan, North Vancouver.	"	30	Empress Mfg. Co., Vancouver
" 17	" ..	37739	Rubinowitz Department Store, Steveston.	"	30	Pioneer Coffee & Spice Mills, Victoria.
" 17	" ..	37740	J. E. Steady, Vancouver.....	½ lb.	30	Kelly, Douglas & Co., Vancouver.
" 17	" ..	37741	Mrs. A Nicholson, Vancouver.	"	25	Oriental Mills, Vancouver...
" 17	" ..	37742	Tong Chong Co., Vancouver..	3 pkgs	30	Todhunter, Mitchell Co., Toronto.
" 17	" ..	37743	City Grocery, Vancouver .....	½ lb.	30	Braid & Co., Vancouver.....
" 18	" ..	37744	C. Groth, Vancouver .....	3 tins	30	Oriental Mills, Vancouver...
" 18	" ..	37745	Empress Mfg. Co., Vancouver.	½ lb.	30	Empress Mfg. Co., Vancouver
DISTRICT OF VICTORIA—						
Oct. 14	Black Pepper...	41559	Windsor Grocery Co., Victoria, B. C.	3 pks.	30	Pioneer Coffee & Spice Mills, Ltd., Victoria, B. C.
" 15	" ..	41560	The West End Grocery Co., Ltd., Victoria, B. C.	3 "	30	R. P. Rithet & Co., Ltd., Victoria, B. C.
" 15	" ..	41561	Copas & Young, Victoria, B.C.	3 "	30	J. Braid & Co., Vancouver..
" 15	" ..	41562	J. W. Speed, Victoria, B. C...	½ lb..	20	Todhunter Mitchell & Co. Toronto.
" 15	" ..	41563	Saunders Grocery Co., Ltd., Victoria, B. C.	½ " ..	15	J. Braid & Co., Vancouver..
" 15	" ..	41564	Wm. B. Hall, Victoria, B. C...	½ " ..	20	Oriental Mills, Vancouver...
" 15	" ..	41565	Harrison & McDonald, Victoria B. C.	3 pks.	45	A. Shilling & Co., San Francisco, Cal.
" 16	" ..	41566	W. A. Jameson, Victoria, B.C.	3 "	30	F. F. Dalley Co., Ltd., Hamilton.
" 18	" ..	41567	L. Dickson, Victoria, B. C....	3 "	30	E. R. Durkee & Co., New York, U.S.A.
" 18	" ..	41568	E. G. Bailey, Victoria, B.C...	3 "	30	Empress Mfg. Co., Vancouver B. C.



SESSIONAL PAPER No. 14

PEPPER.

RESULTS OF ANALYSIS.							
Inspector's Report. (Is not an expression of opinion).	Water Soluble.	Ash per cent.			Microscopical Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
		Total.	Soluble in Hydrochloric Acid.	Insoluble in Hydrochloric Acid (Sand).			

R. W. FLETCHER, INSPECTOR—Concluded.

	p.c.	p.c.	p.c.	p.c.			
.....		4.84			About 10 per cent maize flour	35618	Adulterated.
.....		3.94			Pepper tissues only....	35619	Genuine.
.....		4.60			" "	35620	"
.....		5.16			" "	35621	"

J. F. POWER, INSPECTOR.

Guaranteed first quality . . .	4.14			Pepper tissues only....	37736	Genuine.
Guaranteed absolutely pure.	4.58			" "	37737	"
Full strength.....	5.24			" "	37738	"
Empire Brand, guaran- teed absolutely pure.	4.80			" "	37739	"
.....	2.76			About 25 per cent wheat flour	37740	Adulterated.
.....	5.50			Trace of what starch present.	37741	Doubtful.
Guaranteed absolutely pure.	3.50			Pepper tissues only....	37742	Genuine
.....	3.90			" "	37743	"
Full strength .....	4.04			" "	37744	"
" .....	5.64			" "	37745	"

D. O'SULLIVAN, INSPECTOR.

'Empire' Black pepper . . .	6.04			Pepper tissues only....	41559	Genuine.
'St. James' Black pep- per.	5.82			" "	41560	"
Guaranteed pure.....	6.00			" "	41561	"
Labelled Todhunter's pure Black Pepper.	4.40			" "	41562	"
.....	5.60			" "	41563	"
.....	4.14			Trace of foreign starch present	41564	Doubtful.
'Shilling's Best' . . .	4.40			Pepper tissues only....	41565	Genuine.
'Victoria' pure Black pepper.	3.24			" "	41566	"
'Gauntlet' Black pep- per.	4.46			" "	41567	"
Empress' Black pep- per.	5.70			" "	41568	"



APPENDIX Y.

BULLETIN No. 204—CANNED SOUP.

OTTAWA, March 24, 1910.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report upon 150 samples, purchased throughout Canada, in December last, as Canned Soup.

With two exceptions, due to carelessness of the inspectors, these articles are correctly named. The exceptions are No. 38866 and 42763 ; both of which are dry material, put up in paper, and should not have been accepted for purposes of this inspection.

Complaints have been received from time to time, making mention of the following objections in Canned Soups :—

- 1. Corrosion of the can.
- 2. Unsoundness of the contents.
- 3. Discoloration
- 4. Substitution of other material than that designated on the label, In particular to the substitution of other flesh than chicken (or fowl) in so-called chicken soup.

As to the condition of the can, the samples now reported may be classified as follows :—

	Samples.
Can distinctly corroded .....	7
“ slightly “ .....	3
“ in fair condition .....	14
“ in good “ .....	124
Paper wrappers.....	2
Total.....	150

Corrosion of the can proceeds in the first place from imperfect tinning, but is naturally intensified by the acidity of the contents. In most cases the contents are faintly acid, but generally in so slight a degree as to make quantitative expression of the acidity difficult and unnecessary. In eight (8) samples, the acidity was sufficiently marked to permit of exact determination, and was found to represent percentages of acetic acid (weight in volume) varying from 0.046 to 0.225. Marked corrosion was noted in only one of these eight samples (0.072 acid) and slight corrosion in another (0.127). It is evident, however, that as corrosion due to acidity proceeds, the acid is neutralized, and a fairly high acidity in the fresh soup, may be compatible with strict neutrality in the same sample, after long keeping. In this case, iron goes into solution, (with possible traces of tin or lead). The discoloration complained of is usually due to solution of iron, which, however, can have no poisonous effects. Lead was not found in any sample ; but traces of tin were noted in four (4) samples. The amount was too small to have any physiological significance.



## SESSIONAL PAPER No. 14

As regards the soundness of the contents, these were found to be good in 137 samples, and slightly unsound in 11 samples. In none, however, had decomposition proceeded far enough to be regarded as spoiled, or made dangerous in use.

Some years ago, I made an attempt to distinguish between chicken flesh and veal, (or other substitute) in soups. The results of this examination were so unsatisfactory that further work must be done before a definite pronouncement in the matter can be made.

This is the first time that canned soup has been made the subject of inspection under the Adulteration Act. In the absence of legal standards for the article, and of any established violation of the terms of the Act, I am unable to describe any of the samples herein reported, as being technically adulterated.

I beg to recommend publication of this report as Bulletin No. 204.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



1 GEORGE V., A. 1911  
BULLETIN No. 204—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

## DISTRICT OF NOVA SCOTIA—

1909.						
Dec.	7 Canned Soup ...	41771	John Tobin & Co., Halifax, N.S.	3 tins.	30	Franco-Am. Food Co., Jersey City, U.S.
"	7 " ..	41772	Bauld Bros., Ltd., Halifax, N.S.	3 " .	30	Jos. Campbell & Co., Camden, New Jersey, U.S.
"	7 " ..	41773	J. Frank Crowe & Co., Halifax, N.S.	3 " .	30	Libby, McNeil & Libby, Chicago, Ill.
"	7 " ..	41774	A. & W. Smith & Co., Halifax, N.S.	3 " .	30	Van Camp Packing Co., Indianapolis, U.S.A.
"	7 " ..	41775	Wentzell's, Ltd., Halifax, N.S.	3 " .	35	Libby, McNeil & Libby, Chicago, Ill.
"	13 " ..	41786	J. H. Barss, Wolfville, N.S.	3 " .	35	Jos. Campbell & Co., Camden, New Jersey, U.S.
"	15 " ..	41787	Colin McNab & Co., Dartmouth, N.S.	3 " .	45	Van Camp Packing Co., Indianapolis, U.S.
"	15 " ..	41788	G. A. Ormon, Dartmouth, N.S.	3 " .	38	Libby, McNeil & Libby, Chicago, Ill.
"	15 " ..	41789	Coleman & Eisener, Dartmouth, N.S.	3 " .	45	Jos. Campbell & Co., Camden, N. J., U.S.
"	15 " ..	41790	Forsyth, Jr., Dartmouth, N.S.	3 " .	45	Armour, Ltd., Toronto.....

## DISTRICT OF PRINCE EDWARD ISLAND—

Dec.	6 Canned Soup ...	38583	A. Currie.....	3 tins.	42	Jos. Campbell & Co., Camden, N.J., U.S.
"	8 " ..	38584	R. H. Jenkins, Charlottetown.	3 " .	90	Franco-Am. Food Co., New Jersey, U.S.
"	10 " ..	38585	Brace & McKay, Summerside.	3 " .	45	The Van Camp Packing Co., Indianapolis, U.S.
"	10 " ..	38586	" " ..	3 " .	39	W. A. Laird, Summerside...
"	10 " ..	38587	Sanderson & Co., Charlottetown	3 " .	90	Crosse & Blackwell, London, Eng.
"	15 " ..	38588	M. Duffey & Co., Charlottetown	3 " .	45	Libby, McNeil & Libby, Chicago, Ill.
"	15 " ..	38589	John McKenna, Charlottetown	3 " .	75	H. J. Heinz Co., Pittsburg, U.S.
"	16 " ..	38590	Beer & Goff, Charlottetown....	3 " .	90	C. & E. Morton, London, Eng.
"	16 " ..	38591	Stewart & Son, Charlottetown.	3 " .	45	Jos. Campbell & Co., Camden N.J., U.S.
"	16 " ..	38592	J. T. McDonald, Charlottetown	3 " .	45	Libby, McNeil & Libby, Chicago.

## DISTRICT OF NEW BRUNSWICK—

Dec.	3 Canned Soup ..	39598	H. W. Cole, Ltd., St. John, N.B.	3 tins.	30	Jos. Campbell Co., Camden, N.J., U.S.
"	3 " ..	39599	Baird & Peters, St. John, N.B.	3 " .	119	Franco-Am. Food Co., Jersey City, N.J., U.S.
"	8 " ..	39600	G. E. Barbour Co., Ltd., St. John, N.B.	3 " .	30	John Campbell Co., Camden N.J., U.S.
"	14 " ..	39601	Geo. T. Whelpley, Fredericton, N.B.	3 " .	45	Franco-Am. Food Co., Jersey City Heights, N.J., U.S.
"	16 " ..	39602	Inches & Grimmer, St. Stephen, N.B.	3 " .	45	Joseph Campbell Co., Camden, N.J., U.S.
"	17 " ..	39603	Yerxa Grocery Co., Woodstock, N.B.	3 " .	40	Van Camp Packing Co., Indianapolis, U.S.
"	20 " ..	39604	Weaver & Co., Perth, N.B....	3 " .	45	Jos. Campbell & Co., Camden, N.J., U.S.



SESSIONAL PAPER No. 14  
 CANNED SOUP.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.					No. of Sample.
	Condition of		Acidity of Strained Filtrate (as Acetic)	Metallic Contamin- ation.	Remarks.	
	Can.	Contents.				
R. J. WAUGH, INSPECTOR.						
			p. c.			
Mock turtle soup. . . . .	Good...	Good.....	Slight..	None....	Beef, &c. ....	41771
" . . . . .	" . . . .	" . . . .	" . . . .	" . . . .	" . . . . .	41772
" . . . . .	" . . . .	" . . . .	Mere trace	" . . . .	" . . . . .	41773
Cream of celery soup . . . .	" . . . .	" . . . .	Neutral...	" . . . .	Celery, &c.....	41774
Chicken soup.. . . .	" . . . .	" . . . .	" . . . .	" . . . .	Chicken, rice, celery, &c ..	41775
Consomme soup.....	" . . . .	" . . . .	Mere trace	" . . . .	Clear jellied stock . . . . .	41786
Mock turtle soup.....	" . . . .	" . . . .	Slight..	" . . . .	Solid jellied beef....	41787
" . . . . .	" . . . .	" . . . .	Trace. .	" . . . .	Beef, &c. ....	41788
" . . . . .	" . . . .	" . . . .	Slight....	" . . . .	" . . . . .	41789
Savoy soup. Condensed chicken.	" . . . .	" . . . .	Neutral...	" . . . .	Chicken, rice, &c.. . . .	41790

## THEO. MOORE, INSPECTOR.

.....	Good....	Good ...	Trace.....	None.....	Chicken, rice, parsley.....	38583
.....	" . . . .	" . . . .	Slight....	" . . . .	Beef, rice, curry powder, &c.	38584
Van Camp's concentrated mock turtle soup.	Fair . . .	Not very good.	" . . . .	" . . . .	Beef, &c. ....	38585
Laird's chicken soup . . . . .	Good.....	Good . . .	None. . .	" . . . .	Chicken and jelly. . . . .	38586
Mock turtle soup, thick ...	Corroded..	" . . . .	0.072	" . . . .	Beef tongue, &c . . . . .	38587
Libby's Premier concentrat- ed mock turtle soup.	Good... .	" . . . .	Trace....	" . . . .	Beef, &c . . . . .	38588
Heinz tomato soup, prepar- ed from choice ripe to- matoes and pure sweet cream.	Slightly corroded	" . . . .	0.127	Trace tin	Tomato, &c. ....	38589
C. & E. Morton, oxtailsoup	Good . . .	" . . . .	Trace.....	None . . . .	Beef, bone, vegetables, &c.	38590
Campbell's condensed oxtail soup.	Slightly corroded.	" . . . .	Neutral...	" . . . .	Beef broth, barley, &c . . . .	38591
Libby's Premier concentrat- ed mock turtle soup.	Good . . .	Good.....	Slight..	" . . . .	Beef, onions, &c . . . . .	38592

## J. C. FERGUSON, INSPECTOR.

Campbell's condensed mock turtle soup.	Good . . . .	Good. . .	Slight....	None.....	Beef, &c. . . . .	39598
.....	" . . . .	" . . . .	Trace.....	" . . . .	" . . . . .	39599
Campbell's condensed mock turtle soup.	" . . . .	" . . . .	" . . . .	" . . . .	" . . . . .	39600
Mock turtle.....	" . . . .	" . . . .	Slight....	" . . . .	" . . . . .	39601
Campbell's condensed mock turtle soup.	" . . . .	" . . . .	Trace. . .	" . . . .	" . . . . .	39602
Van Camp's concentrated mock turtle soup	Slightly corroded	Not in very good shape.	Slight....	" . . . .	" . . . . .	39603
Campbell's condensed mock turtle soup.	Good . . . .	Good.....	" . . . .	" . . . .	" . . . . .	39604



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF NEW BRUNSWICK—

1910.						
Jan.	4	Canned Soup ...	39605 The Sussex Mercantile Co., Ltd., Sussex, N.B.	3 tins.	36	The Wm. Davies Co., Ltd. Toronto.
"	5	"	39306 F. P. Reid & Co., Moncton, N.B.	3 "	36	Armour, Ltd.....
"	8	"	39607 McKenzie & Trueman, Campbellton, N.B.	3 "	45	Jos. Campbell Co., Camden, N.J.

DISTRICT OF QUEBEC—

1909.						
Dec.	22	Canned Soup ...	36667 A. Drolet, 714 Rue St. Valier..	3 tins.	45	Jno. Campbell, New Jersey .
"	22	"	36668 Jos. Falardeau, 271 Rue St. Joseph.	3 "	60	Heinz's, Pittsburgh, N.J....
"	22	"	36669 " " "	3 "	45	J. B. Reneaud, Quebec.....
"	22	"	36670 " " "	3 "	45	J. A. Chabot, Quebec.....
"	22	"	36671 C. Riverin, 55 Rue de la Couronne.	3 "	45	Langlois & Paradis, Quebec .
"	22	"	36672 " " "	3 "	45	" " "
"	22	"	36673 " " "	3 "	45	" " "
"	22	"	36674 " " "	3 "	45	" " "
"	22	"	36675 R. Riverin, 55 Rue de la Couronne.	3 "	45	" " "
"	22	"	36676 " " "	3 "	45	" " "

DISTRICT OF ST. HYACINTHE—

Dec.	7	Canned Soup ...	38859 J. P. Paul, Sorel.....	3 tins.	45	The West Lorne Canning & Evap. Co., West Lorne, Ont.
"	9	"	38860 L. E. I. Choquette, Farnham..	3 "	54	H. J. Heinz Co., Pittsburgh.
"	10	"	38861 R. Goold, St. Jean.....	3 "	30	Armour, Ltd., Toronto.....
"	20	"	38862 A. McLean & Riddle Bros., Danville.	3 "	30	" .....
"	20	"	38863 S. L. Gibson, Danville.....	3 "	45	J. Campbell Co., Camden, N.J., U.S.
"	20	"	38864 A. J. Hudson, Richmond.....	3 "	45	" " "
"	21	"	38865 B. E. Goyette, Magog .....	3 "	30	Simcoe Canning Co., Simcoe.
"	21	"	38866 H. Chamberlain, Magog.....	3 "	15	W. Paul, Agt., Montreal....
"	21	"	38867 W. Murray & Co., Sherbrooke.	3 "	45	Libby McNeill & Libby, Chicago.
"	25	"	38868 Thos. Hebert, St. Hyacinthe..	3 "	45	J. Campbell Co., Camden, N.J., U.S.



SESSIONAL PAPER No. 14

## CANNED SOUP.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.				No. of Sample.	
	Condition of		Acidity of Strained Filtrate (as Acetic)	Metallic Contami- nation.		Remarks.
	Can.	Contents.				

J. C. FERGUSON, INSPECTOR—*Concluded.*

			p. c.			
Davies condensed soups, mock turtle.	Good..	Good.....	Trace.....	None....	Beef, barley, turnips, car- rots, &c.	39605
Savoy soups. Condensed mock turtle.	" .....	" .....	Slight..	" .....	Beef, jellied.....	39606
Campbell's condensed mock turtle soup.	" .....	" .....	" .....	" .....	Beef, &c. ....	39607

E. BELAND, INSPECTOR.

.....	Fair .....	Good....	Slight....	None....	Beef, &c. ....	36667
.....	" .....	Fair .....	0.098	" .....	Tomato .....	36668
.....	Good....	Good.....	0.061	" .....	" .....	36669
.....	" .....	" .....	Trace....	" .....	Clear broth .....	36670
.....	" .....	" .....	" .....	" .....	Beef, &c. ....	36671
.....	" .....	" .....	Neutral.	" ..	Chicken, parsley, rice and onions.	36672
.....	" .....	" .....	Slightly ..	" ..	Barley, beans, peas, carrots, turnips, potatoes, &c.	36673
.....	" .....	" .....	Trace....	" .....	Peas .....	36674
.....	" .....	" .....	0.077	Trace tin.	Tomato ..	36675
.....	" .....	" .....	Trace.....	None	Beef, rice, celery, curry, &c.	36676

J. C. ROULEAU, INSPECTOR.

'Lorne' brand chicken .....	Good.....	Good.....	Trace.....	None.....	Chicken and broth.....	38859
'Tomato' ..	Fair .....	" .....	0.225	Trace tin	Tomato .....	38860
'Mock Turtle' .....	Good.....	" .....	Trace .....	None .....	Beef, vegetables....	38861
'Chicken' ..	" .....	" .....	Neutral...	" .....	Chicken, rice, parsley.....	38862
'Julienne' .....	" .....	" .....	Trace....	" .....	Beef broth and chopped vegetables.	38863
'Ox Tail' .....	" .....	" .....	" .....	" ..	Oxtail, barley, vegetables, &c.	38864
'Chicken' .....	" .....	" .....	Neutral...	" .....	Chicken.....	38865
'Potato' .....	.....	.....	.....	.....	Potato tablets, collected by mistake.	38866
'Mock Turtle' .....	Corroded..	Fair.....	Slightly ..	Trace tin.	Beef, &c .....	38867
" .....	" ..	Good..	" ..	" ..	" .....	38868



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF MONTREAL—

1909.						
Dec.	1	Canned Soup ...	40351 James Duncan, Lachine, P.Q.	3 tins.	45	Joseph Campbell, Camden, N.J., U.S.
"	8	" ..	40352 Gravel Freres, St. Catherine St. W., Montreal.	3 "	90	Franco Am. Food Co., Jersey City Hights, N.J.
"	8	" ..	40353 R. Walsh, Cor. St. Genevieve & Dorchester St., Montreal.	3 "	30	Van. Camp Packing, Indianapolis, Ind.
"	8	" ..	40354 Davies Ltd., Chaboillez Square, Montreal.	3 "	15	The Wm. Davies Co., Ltd., Toronto.
"	14	" ..	40355 P. Daoust, St. Anne de Belle vue, P.Q.	3 "	30	Campbells .....
"	14	" ..	40356 " " "	3 "	45	Armour's, Ltd., Toronto....
"	15	" ..	40357 J. E. Desaulniers, 1121 St. Lawrence B., Montreal.	3 "	25	" " ....
"	16	" ..	40358 P. Simard, St. Jerome, P.Q.	3 "	45	Campbells. ....
"	21	" ..	40359 A. Girard, 293 St. Antoine St., Montreal.	3 "	25	W. Clark, Montreal... ..
"	21	" ..	40360 Beauvais & Lalonde, 482 St. James St., Montreal.	3 "	60	Heinz.....

DISTRICT OF OTTAWA—

Nov.	24	Canned Soup. ..	42846 C. B. McLean, Ottawa.....	3 tins.	30	The Wm. Davies Co., Ltd., Toronto.
Dec.	4	" ..	42847 Ellis Bros., Ottawa . . . . .	3 "	45	Unknown .....
"	6	" ..	42848 C. Moreland, Bank St., Ottawa	3 "	35	The Wm. Davies Co., Ltd., Toronto.
"	6	" ..	42849 A. L. Pinard & Sons, Ottawa..	3 "	75	Hudon Hebert et Cie, Montreal.
"	11	" ..	42850 Bennett & Code, Carleton Place	3 "	40	Unknown.....
"	15	" ..	42851 Kavanagh Bros., Ottawa.....	3 "	90	Crosse & Blackwell, London, Eng.
"	15	" ..	42852 A. E. Rea Ltd., Ottawa. ....	3 "	37	Unknown.. ..
"	15	" ..	42853 C. Moreland, 184 Sparks St., Ottawa.	3 "	75	Henri Jonas, Montreal.....
"	16	" ..	42854 W. Hyndman, Smith's Falls ..	3 "	38	Robertson Nichole & Co., Smith's Falls.
"	18	" ..	42855 P. Lamoureux, Ottawa.....	3 "	38	Unknown .....

DISTRICT OF KINGSTON—

Nov.	29	Canned Soup. ..	42762 P. A. Haffner, Kingston .....	3 tins.	38	Libby McNeill & Libby, Chicago, Ill.
"	29	" ..	42763 J. McCulla, Kingston.....	3 "	30	W. Symington Co., Bowdan Marborough, Eng.
"	30	" ..	42764 A. Glover, Kingston.....	3 "	45	H. J. Heinz, Pittsburg ...
Dec.	1	" ..	42765 Wallbridge & Clarke, Belleville, Ont.	3 "	45	Campbell, Camden, N.J.....
"	1	" ..	42766 " " "	3 "	45	Van Camp, Indianapolis, U.S.



SESSIONAL PAPER No. 14

CANNED SOUP.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.					No. of Sample.
	Condition of		Acidity of Strained Filtrate (as Acetic)	Metallic Contami- nation.	Remarks.	
	Can.	Contents.				

J. J. COSTIGAN, INSPECTOR.

			p. c.			
Campbells 'Mock Turtle'.	Good.....	Good.....	Trace.....	None....	Beef, &c.....	40351
" "	".....	".....	Slightly..	".....	".....	40352
" "	Fair.....	Fair.....	".....	".....	".....	40353
" "	Good.....	Good....	".....	".....	Beef, turnips, carrots, bar- ley, &c.	40354
'Consomme'.....	".....	".....	Trace.....	".....	Clear broth.....	40355
'Tomato'.....	".....	".....	Slightly..	".....	Tomato.....	40356
'Mock Turtle'.....	Corroded..	Fair.....	Trace.....	".....	Beef, &c.....	40357
'Ox Tail'.....	Fair.....	".....	".....	".....	Beef bone, barley, &c.....	40358
'Mock Turtle'.....	Corroded..	Good.....	Slightly..	".....	Beef, &c.....	40359
'Tomato'.....	Fair.....	Good.....	0.054	".....	Tomato.....	40360

J. A. RICKEY, INSPECTOR.

Davies 'Mock Turtle'.....	Good.....	Good.....	Trace.....	None.....	Beef, turnips, barley, &c..	42846
Campbells 'Mock Turtle'..	".....	".....	".....	".....	Beef, vegetables.....	42847
Davies 'Mock Turtle'.....	".....	".....	".....	".....	Barley, carrots turnips,&c.	42848
Franco Am. 'Mock Turtle'.	".....	".....	".....	".....	.....	42849
Van. Camps 'Mock Turtle'.	Corroded..	Fair.....	Slightly..	".....	.....	42850
Crosse & Blackwell 'Mock Turtle'.	Good.....	Good.....	".....	".....	Pork and vegetables.....	42851
Campbells 'Mock Turtle'..	Fair.....	Fair.....	".....	".....	Beef and vegetables.....	42352
'Mock Turtle'.....	Good.....	Good.....	Trace.....	".....	.....	42853
Libby's 'Mock Turtle'....	Fair.....	".....	".....	".....	Beef and vegetables.....	42854
Armours 'Ox Tail'..	Good.....	".....	".....	".....	Beef, bone and vegetable..	42855

JAS. HOGAN, INSPECTOR.

.....	Good.....	Good.....	Slight..	None....	Vegetables, all sorts.....	42762
.....	.....	.....	.....	.....	Collected by mistake. Soup powder, tomato.	42763
.....	Good.....	Good.....	Acid.....	None.....	Tomato.....	42764
.....	".....	".....	".....	".....	".....	42765
.....	".....	".....	0.046	".....	Clear broth.....	42766



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF KINGSTON—

1909.						
Dec.	1	Canned Soup...	42767 Hugh Crozier, Cobourg..	3 tins.	38	Libby McNeill & Libby, Chicago, Ill.
"	1	"	42768 N. Burnet, Cobourg.....	3 "	38	Campbell, Camden, N.J.....
"	1	"	42769 J. Curtis, Port Hope .....	3 "	38	" ..
"	2	"	42770 S. A. Oke, Peterboro.....	3 "	30	Davies Co., Toronto. ....
"	2	"	42771 R. A. Dutton, Peterboro .....	3 "	30	" .....

DISTRICT OF TORONTO—

Dec.	1	Canned Soup. . .	41411 J. A. Brown, Collingwood....	3 tins.	25	T. Long Bros., Ltd., Collingwood.
"	3	"	41412 McLauchlan & Sons Co., Ltd., Owen Sound.	3 "	30	The Armour Canning Co., Chicago, U.S.
"	8	"	41413 J. H. Marshall, Niagara Falls.	3 "	45	The Van Camp Packing Co., Indianapolis, U.S.
"	16	"	41414 The W. H. Merriman Co., St. Catharines.	3 "	30	Joseph Campbell Co. Camden, N. J., U. S.
"	18	"	41415 W. Joyce, Oakville....	3 "	35	Wm. Clark, Montreal. ....
"	21	"	41416 The Wm. Davies Co., Ltd, Toronto.	3 "	30	Vendors... ..
"	21	"	41417 Perkins Ince Co., Ltd., Toronto	3 "	45	Aylmer Canning Co., Ltd., Aylmer.
"	22	"	41418 J. W. Schultz, Toronto.....	3 "	30	The F. R. Lalor Canning Co. Ltd., Dunville.
"	23	"	41419 Fred. Cox, Toronto ...	3 "	45	H. J. Heinz Co., Pittsburgh.
"	23	"	41420 Grand Valley Produce Co., Toronto.	3 "	45	Libby McNeill & Libby, Chicago, Ill.

DISTRICT OF LONDON—

Dec.	7	Canned Soup. . .	30874 A. J. Groom, Guelph.....	3 tins.	45	Semson & Co., Guelph. ...
"	8	"	30875 Dunkee & Co., Berlin.....	3 "	45	Joseph Campbell Co.....
"	8	"	30877 Beck & Schell, Berlin.....	3 "	45	Jas. Lumbers, Toronto.....
"	9	"	30881 A. Beattie & Co., Stratford. .	3 "	25	William Clark & Co., Montreal.
"	9	"	30882 " .....	3 "	45	Jas. Lumbers, Toronto .....
"	13	"	30895 J. McEwen, Stratford.....	3 "	30	Stratford Wholesale Grocery, Stratford.
"	13	"	30897 P. T. Dean .....	3 "	35	H. P. Eckert & Co., Toronto
"	13	"	30898 O. C. Whitley, Goderich.....	3 "	30	A. M. Smith, London. ....
"	14	"	30900 Sturdy & Co., Goderich.....	3 "	45	Gillard & Co., Hamilton.....
"	17	"	44704 Michael Durkin, Mitchell. ....	3 "	45	A. M. Smith, London, Ont..



SESSIONAL PAPER No. 14

CANNED SOUP.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.				No. of Sample.	
	Condition of		Acidity of Strained Filtrate (as Acetic)	Metallic Contamin- ation.		Remarks.
	Can.	Contents.				

JAS. HOGAN, INSPECTOR—*Concluded.*

			p. c.			
.....	Good	Good	Trace.....	None.....	Oxtail, barley, &c.	42767
.....	"	"	Slightly acid.	"	Tomato.	42768
.....	"	"	Trace.	"	Beef, &c.....	42769
.....	Fair	"	"	"	"	42770
.....	Good	"	"	"	Oxtail, vegetables.	42771

H. J. DAGER, INSPECTOR.

The North Land Mfg. Co., Toronto. 'Mock Turtle.'	Good.....	Good.....	Slight....	None.....	Beef, barley, turnips, etc..	41411
Armour's 'Mock Turtle'..	"	"	Trace.....	"	Beef, etc.....	41412
Van Camp's 'Chicken'....	"	"	Neutral...	"	Chicken and rice.	41413
Campbell's 'Mock Turtle.'	"	"	Trace.....	"	Beef, etc.....	41414
Clark's 'Chicken' .....	"	"	Neutral...	"	Chicken, broth..	41415
Davies 'Mutton Broth'...	"	"	Trace.....	"	Mutton, barley, turnips, etc.	41416
'Chicken' .....	"	"	Neutral...	"	Chicken and broth	41417
" .....	"	"	"	"	"	41418
Heinz Tomato Soup. Con- tains no benzoate soda or other artificial preserva- tive.	"	"	Acid..	"	Tomato	41419
Libby's Premier "Ox Tail"	Fair	"	Trace.....	"	Beef and bone.....	41420

T. KIDD, INSPECTOR.

'Mock Turtle' .....	Fair	Good.....	Trace....	None.....	Beef, etc	30874
" .....	Good	"	"	"	"	30875
'Tomato' .....	"	"	Slightly ..	"	Tomato.....	30877
'Mock Turtle' .....	"	"	Trace....	"	Beef, etc	30881
'Ox Tail' .....	"	"	"	"	Oxtail and barley.	30882
.....	"	"	"	"	Beef, etc...	30895
.....	"	"	Very slight.	"	Peas, beans, carrots, par- snips, turnips, etc.	30897
.....	"	"	"	"	"	30898
'Mock Turtle' .....	"	"	Trace....	"	Beef, etc..	30900
.....	"	"	"	"	Oxtail and barley	44704



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF WINDSOR—

1909.						
Dec.	6 Canned Soup ...	42653	H. B. Hodgkins, Aylmer, Ont	3 tins.	38	W. Clark, Montreal....
"	6 " ..	42659	J. G. Heiter, Aylmer, Ont...	3 " .	40	Van Camp Packing Co., Indianapolis.
"	7 " ..	42663	W. J. Wilkins, Tillsonburg....	3 " .	38	Armour Co., Ltd., Toronto..
"	7 " ..	42665	Stillwell Bros., Tillsonburg....	3 " .	40	Libby's, Chicago.....
"	8 " ..	42667	G. A. Curtis, Simcoe.....	3 " .	40	Van Camp Packing Co., Indianapolis.
"	8 " ..	42669	Geo. H. Widner, Simcoe .....	3 " .	30	Armour Co. Ltd., Toronto...
"	9 " ..	42682	A. L. Vanstone, Brantford....	3 " .	38	Van Camp Packing Co., Indianapolis.
"	9 " ..	42684	J. T. Wallace, Brantford.....	3 " .	75	Lipton, Ltd., London, Eng..
"	10 " ..	42687	F. C. Toon, London, Ont.....	3 " .	45	Jos. Campbell Co., Camden, N. J., U.S.
"	10 " ..	42692	T. A. Rowat & Co., London, Ont.	3 " .	45	Columbia Conserve Co., Indianapolis.

DISTRICT OF MANITOBA—

Dec.	9 Canned Soup ...	39851	J. O'Hare, Winnipeg... ..	3 tins.	30	The Van Camp Packing Co., Indianapolis, U. S.
"	9 " ..	39852	J. Grant, Winnipeg.....	3 " .	38	" "
"	9 " ..	39853	A. W. Smith, Winnipeg ...	3 " .	40	" "
"	10 " ..	39854	A. R. Christie, Winnipeg....	3 " .	40	" "
"	10 " ..	39855	H. E. Weldon & Co., Winnipeg	3 " .	40	" "
"	13 " ..	39856	J. Paterson, Winnipeg.....	3 " .	40	" "
"	16 " ..	39857	Wm. Mahoney, Winnipeg....	3 " .	45	" "
"	16 " ..	39858	The Hardy Buchanan Co., Winnipeg.	3 " .	40	" "
"	21 " ..	39859	The Steen Copeland Co., Dauphin.	3 " .	45	" "
"	22 " ..	39860	J. Paterson, Winnipeg.....	3 " .	40	" "

DISTRICT OF CALGARY—

Dec.	10 Canned Soup...	43611	H. W. Ireland Co., Medicine Hat.	3 tins.	45	Van Camp Packing Co., Indianapolis,
"	10 " ..	43612	R. Dunn, Medicine Hat .....	3 " .	60	" " ..
"	11 " ..	43613	Spencer & Todd, Medicine Hat	3 " .	60	" " ..
"	11 " ..	43614	H. Morrow, Medicine Hat....	3 " .	45	Joseph Campbell Co., Camden, N.J.
"	30 " ..	43615	Hudson's Bay Co., Lethbridge.	3 " .	1.05	Libby, McNeil & Libby, Chicago.
"	30 " ..	43616	Bentley Co., Ltd., Lethbridge.	3 " .	1.05	Crosse & Blackwell, London, Eng.



SESSIONAL PAPER No. 14

## CANNED SOUP.

Inspector's Report (Is not an expression of opinion).	RESULTS OF ANALYSIS.					No. of Sample.
	Condition of		Acidity of Strained Filtrate (as Acetic)	Metallic Contamin- ation.	Remarks.	
	Can.	Contents.				
JNO. TALBOT, INSPECTOR.						
			p. c.			
Clark's Concentrated 'Mock Turtle.'	Corroded..	Poor.....	Slightly ..	None ....	Mock Turtle.....	42653
'Mock Turtle' .....	Fair .....	" .....	Trace. ....	" .....	" .....	42659
Savoy Soups. 'Chicken' Gumbo.	Good.....	Good.....	" .....	" .....	Chicken and vegetables....	42663
Libby's Concentrated 'Chicken.'	" .....	" .....	Neutral...	" .....	Chicken and rice. ....	42665
Van Camp's Concentrated 'Mock Turtle.'	" .....	" .....	Slight....	" .....	Beef, etc .....	42667
Savoy Soups. 'Green' Peas.'	" .....	" .....	Trace.....	" .....	Green Peas.....	42669
Van Camp's Concentrated 'Clam Chowder.'	" .....	" .....	Slight....	" .....	Broth and vegetables.....	42682
Lipton's Superior 'Mock Turtle.'	" .....	" .....	Trace.....	" .....	Mock turtle....	42684
Campbell's Condensed 'To- mato.'	" .....	" .....	Slight ....	" .....	Tomato.....	42687
Columbia highest grade 'Mock Turtle.'	" .....	" .....	" .....	" .....	Vegetables and beef .....	42692

## A. C. LARIVIERE, INSPECTOR.

'Tomato' .....	Good.....	Good .....	Slight .....	None .....	Tomato .....	39851
'Mock Turtle' .....	" .....	" .....	Trace.....	" .....	Mock Turtle .....	39852
" .....	" .....	" .....	" .....	" .....	" .....	39853
" .....	" .....	" .....	" .....	" .....	" .....	39854
" .....	" .....	" .....	" .....	" .....	" .....	39855
" .....	" .....	" .....	" .....	" .....	" .....	39856
" .....	" .....	" .....	Slight....	" .....	" .....	39857
" .....	" .....	" .....	Trace. ....	" .....	" .....	39858
" .....	" .....	" .....	" .....	" .....	Beef and vegetables.....	39859
" .....	" .....	" .....	Slight ....	" .....	Mock Turtle.....	39860

## R. W. FLETCHER, INSPECTOR.

.....	Fair.....	Good. ..	Slight....	None.....	Mock Turtle.....	43611
.....	Good.....	" .....	" .....	" .....	" .....	43612
.....	" .....	" .....	Trace .....	" .....	" .....	43613
.....	" .....	" .....	" .....	" .....	Vegetables. ....	43614
.....	" .....	" .....	Slight....	" .....	Beef and vegetables... ..	43615
.....	" .....	" .....	Trace.....	" .....	Pork, &c.....	43616



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF CALGARY—

1910						
Jan.	5 Canned Soup...	43617	Hallier & Aldridge, Edmonton	3 tins.	45	Van Camp Packing Co., Indianapolis.
"	5	43618	J. H. Morris & Co., Edmonton	3 "	45	Libby, McNeil & Libby, Chicago.
"	5	43619	Capital Mer. Co., Edmonton..	3 "	45	W. Clarke, Montreal.....
"	5	43620	City Grocery Co., Edmonton..	3 "	75	Franco-Am. Food Co., Jersey City Heights, N.J.

DISTRICT OF VANCOUVER—

1909.						
Dec.	9 Canned Soup...	37778	C. A. Welch, New Westminster.	3 tins.	40	Van Camp Packing Co., Rochester, N.Y.
"	9	37779	T. S. Annandale, New Westminster.	3 "	40	" " "
"	9	37780	Geo. Adams, New Westminster	3 "	40	California Fruit Growers' Assoc.
"	9	37781	West End Grocery, New Westminster.	3 "	25	Libby, McNeil & Libby, Chicago, Ill.
"	9	37782	Kelly, Douglas & Co., Vancouver.	3 "	40	Armours, Ltd, Chicago, Ill..
"	10	37783	Hudson Bay Co., Vancouver..	3 "	30	Jos. Campbell Co., New Jersey.
"	10	37784	Leeson, Dickie Co., Vancouver	3 "	40	Wm. Davis Co.....
"	10	37785	W. H. Malkin & Co., Vancouver.	3 "	50	Crosse & Blackwell....
"	10	37786	Woodwards Dept. Store, Vancouver.	3 "	30	N. J. Heinz & Co., Pittsburgh, Pa.
"	10	37787	A. MacDonald & Co., Vancouver.	3 "	30	W. Clark, Montreal.....

DISTRICT OF VICTORIA—

Dec.	10 Canned Soup...	41584	Windsor Grocery Co., Victoria, B.C.	3 tins.	40	Van Camp Packing Co., Indianapolis, U.S.A.
"	10	41585	W. Speed, Victoria, B.C.....	3 "	35	" " "
"	10	41586	The Saunders Grocery Co., Ltd., Victoria, B.C.	3 "	40	Joseph Campbell Co., Camden, N.J.
"	10	41587	The Saunders Grocery Co., Ltd., Victoria, B.C.	3 "	35	Wm. Davies Co., Ltd., Toronto.
"	13	41588	Harrison & McDonald, Victoria, B.C.	3 "	45	Aylmer Canning Co., Ltd., Hamilton, Ont.
"	13	41589	Acton Bros., Victoria, B.C....	3 "	40	Crosse & Blackwell, London, Eng.
"	14	41590	The West End Grocery Co., Ltd., Victoria, B.C.	3 "	40	Joseph Campbell Co., Ltd., Camden, N.J.
"	14	41591	E. G. Bailey, Victoria, B.C...	3 "	30	The Wm. Davies Co., Ltd., Toronto.
"	14	41592	D. H. Ross & Co., Victoria, B.C.	3 "	1.00	Brand & Co., London, Eng..
"	14	41593	A Pool, Victoria, B.C.....	3 "	75	Wm. Clark, Montreal.....



SESSIONAL PAPER No. 14

CANNED SOUP.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.				Remarks.	No. of Samples.
	Condition of		Acidity of Strained Filtrate (as Acetic)	Metallic Contamin- ation.		
	Can.	Contents.				

R. W. FLETCHER, INSPECTOR—*Concluded.*

			p.c.			
.....	Good.....	Good.....	Trace.....	None.....	Beef, &c.....	43617
.....	".....	".....	Slight.....	".....	Mock Turtle.....	43618
.....	".....	".....	".....	".....	Beef, &c.....	43619
.....	".....	".....	Trace.....	".....	".....	43620

J. F. POWER, INSPECTOR.

'Chicken Soup'.....	Good.....	Good.....	Trace.....	None.....	Chicken and rice.....	37778
'Mock Turtle'.....	".....	".....	Slight.....	".....	Beef, &c.....	37779
".....	".....	".....	".....	".....	.....	37780
".....	".....	".....	".....	".....	Tomato.....	37781
".....	".....	".....	Trace.....	".....	.....	37782
".....	".....	".....	".....	".....	.....	37783
".....	".....	".....	".....	".....	.....	37784
".....	".....	".....	".....	".....	.....	37785
".....	".....	".....	Acid.....	".....	Tomato.....	37786
".....	".....	".....	Slight.....	".....	.....	37787

D. O'SULLIVAN, INSPECTOR.

Van Camp's 'Mock Turtle' Soup.....	Good.....	Good.....	Trace.....	None.....	.....	41584
Van Camp's 'Ox Tail'.....	".....	".....	".....	".....	Ox tail and barley.....	41585
Campbell's 'Ox Tail'.....	".....	".....	".....	".....	Ox tail.....	41586
Davies' 'Mulligatawny'.....	".....	".....	".....	".....	Beef and vegetables.....	41587
Canada first, 'Chicken'.....	".....	".....	Neutral.....	".....	Chicken and jelly.....	41588
C. & B. 'Mock Turtle'.....	".....	".....	Trace.....	".....	.....	41589
Campbell's 'Mock Turtle'.....	".....	".....	Slight.....	".....	.....	41590
Davies' 'Mock Turtle'.....	".....	".....	Trace.....	".....	.....	41591
The A 1 'Mock Turtle'.....	".....	".....	Slight.....	".....	.....	41592
Superior 'Chicken'.....	".....	".....	Trace.....	".....	Chicken and broth.....	41593







SESSIONAL PAPER No. 14

## APPENDIX Z.

## BULLETIN No. 205—ARSENATE OF LEAD.

OTTAWA, March 31, 1910.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report dealing with 26 samples purchased as Arsenate of Lead. This collection was made at the suggestion of the Fruit Division of the Department of Agriculture; the Ontario Agricultural College, Guelph, and others interested. Paris Green is specifically named, in Schedule 5, of the Adulteration Act, and has been the subject of four reports by this department (see Bulletins 40, 42, 88 and 158). It was considered that the newer insecticide, which is to some extent replacing Paris Green, should be examined; and the accompanying report will enable agriculturists to form an idea of the commercial article, as purchased by our inspectors.

Instructions were issued quite distinctly, for the purchase of Arsenate of Lead; but certain of our inspectors have not been guided by these, and I find such substances as hellebore, pyrethrum, &c., accepted by the official, instead of Arsenate of Lead. This is particularly the case with the inspectors for Quebec, London and Kingston districts.

In consequence of these mistakes, I find only eighteen (18) samples, true to name.

The methods of analysis used are essentially those prescribed by the Association of Official Agricultural Chemists (see Bull. No. 107, revised, p. 239, Bureau of Chemistry, Washington).

It will be noted that the physical condition in which this article is offered for sale varies from practical dryness to a water content amounting to 49 per cent. As calculated upon the original material; and also upon the dry material, the variations are as follows:—

Arsenic ( $\text{As}_2\text{O}_5$ )—

	Original.	Dry.
Maximum .....	29·90	30·90
Minimum .....	12·44	22·28
Mean .....	19·57	27·09

Lead ( $\text{PbO}$ )—

Maximum .....	72·10	72·10
Minimum .....	33·46	62·53
Mean .....	48·55	66·54

As we have no standards for this article, I am unable to offer any opinion. It is however quite evident that it varies greatly in value, and that legal standards, and limits of variability should be defined.

I beg to recommend the publication of this report as Bulletin No. 205.

I have the honour to be, sir,  
Your obedient servant,

A. MCGILL,  
Chief Analyst.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF NOVA SCOTIA—

1909.						
Dec. 6	Arsenate of Lead (Insecticide).	41766	Nat. Drug and Chem. Co., 1 jar., Halifax, N.S.	15		Vreeland & Co., New Jersey, U.S.A.
" 13	"	41767	T. P. Calkin & Co., Kentville, 1 lb., N.S.	20		Niagara Sprayer Co., Middleport, N.Y.
" 13	"	41768	B. H. Dodge, Kentville, N.S. 1 "	25		Merrimac Chem. Co., Boston, Mass.
" 15	"	41769	A. M. Bell & Co., Halifax, 1 "., N.S.	25		" "
" 15	"	41770	C. A. Barnstead, Halifax, 1 "., N.S.	0		Unknown

DISTRICT OF NEW BRUNSWICK—

Dec. 2	Arsenate of Lead (Insecticide).	39603	Nat. Drug and Chem. Co., 3 pkgs Ltd., St. John, N.B.	120		Vreeland Chem. Co., Little Falls, New Jersey, U.S.
" 14	"	39609	R. T. Mack, Fredericton, 3 "., N.B.	120		Nat. Drug and Chem. Co., Ltd., St. John, N.B.
1910.						
Jan. 3	"	39610	W. H. Thorne & Co., St. John, N.B.	75		The Grasselli Chem. Co., Cleveland, Ohio, U.S.

DISTRICT OF QUEBEC—

1909.						
Dec. 22	Arsenate of Lead (Insecticide).	36597	L. E. Martel, 91 Rue St. Joseph.	1 lb.	25	Lyman's, Ltd., Montreal...
" 22	"	36677	J. Masson, 808 Rue St. Valier	1 "	75	W. Brunet & Cie, Quebec...
" 22	"	36678	" " " "	1 "	75	Toronto Pharmacal Co.....
" 22	"	36679	" " " "	1 "	65	" " " "
" 22	"	36680	J. Laroche, 405 Rue St. Valier	1 "	25	Nat. Drug Co., Montreal...

DISTRICT OF MONTREAL—

Dec. 17	Arsenate of Lead (Insecticide).	40336	Lyman's, Ltd., Montreal.... 3 jars.	75		Grasselli Chem. Co., Cleveland, Ohio.
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\* Is not arsenate of lead.



SESSIONAL PAPER No. 14  
ARSENATE OF LEAD (INSECTICIDE).

Inspector's Report. (Is not an expres- sion of opinion).	RESULTS OF ANALYSIS.								Remarks and opinion of the Chief Analyst.		
	Moisture in Sample as Received.	Results Calculated on the dry Sample.					Percentage Weights in original Sample			No. of Sample.	
		Total Arsenic p.c. $\text{As}_2\text{O}_5$ .	Total Lead p.c. $\text{Pb.O.}$	Water Soluble Solids.	Water Soluble Arsenic p.c. $\text{As}_2\text{O}_5$ .	Water Soluble Lead p. c. $\text{Pb.O.}$	Water Soluble Impurities.	Arsenic.			Lead.

R. J. WAUGH, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
.....	0.15	28.75	63.64	1.50	0.05	0.00	1.45	28.75	63.64	41766
'Niagara' brand.	35.64	28.02	62.53	3.50	0.17	0.00	3.33	18.02	40.29	41767
'Swift's' brand..	48.82	27.31	68.06	0.50	0.05	0.00	0.45	13.97	34.83	41768
"	36.32	26.59	68.42	0.50	0.05	0.00	0.45	16.93	43.56	41769
Labelled 'Nation- al' arsenate of lead.	46.92	30.90	63.83	0.50	0.05	0.00	0.45	16.40	33.88	41770

J. C. FERGUSON, INSPECTOR.

.....	47.56	29.46	63.83	1.00	0.05	0.73	0.22	15.45	33.47	39608
.....	47.72	30.61	64.01	0.50	0.05	0.36	0.09	16.01	33.46	39609
Grasselli arsenate of lead.	41.87	24.29	69.71	0.50	0.05	0.00	0.45	14.11	40.53	39610

E. BELAND, INSPECTOR.

.....		*								36507	Labelled 'helle- bore.'
.....		*								36677	Labelled 'Per- sian insect pow- der.'
.....		*								36678	Labelled 'insect powder.'
.....		*								36679	Labelled 'Per- sian insect pow- der.'
.....		*								36680	Is hellebore.

J. J. COSTIGAN, INSPECTOR.

.....	44.34	26.59	68.98	0.50	0.05	0.00	0.45	14.80	38.90	40386
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Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.
				Quantity.	Cents.	

DISTRICT OF KINGSTON—

1909.						
Nov. 29	Arsenate of Lead (Insecticide).	41182	Nat. Drug Co., Kingston....	1 lb ..	25	Vendors.....
" 29	" ..	41183	J. A. McFarlane, Kingston..	3 tins.	75	International, Toronto .....

DISTRICT OF TORONTO—

Dec. 16	Arsenate of Lead (Insecticide).	41397	The St. Catharines C. S. and F. Co., Ltd., St. Catharines	1 lb ..	15	Chem. Laboratories, Ltd., Toronto.
" 20	" ..	41398	Chemical Laboratories, Ltd., Toronto.	1 " ..	15	Vendors.....

DISTRICT OF LONDON—

Dec. 17	Arsenate of Lead (Insecticide).	44706	W. B. Bailey, Mitchell.....	3 oz ..	60	Nat. Drug Co., Toronto ....
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DISTRICT OF WINDSOR—

Dec. 13	Arsenate of Lead (Insecticide).	42696	Spramotor Co., London.....	3 jars.	90	Merrimac Chem. Co., Boston
" 13	" ..	42697	A. J. Morgan.....	3 tins.	75	Leggett & Brother, New York.

DISTRICT OF VICTORIA—

Dec. 17	Arsenate of Lead (Insecticide).	41629	Wm. Jackson & Co., Victoria, B.C.	1 lb .	25	Henderson Bros., Ltd., Victoria, B.C.
" 17	" ..	41630	The Brackman Ker Milling Co., Victoria, B.C.	1 " ..	20	Merrimac Chem.Co., Boston, Mass.
" 17	" ..	41631	" ..	1 " ..	20	The B. C. Soap Works, Victoria, B.C.
" 20	" ..	41632	Henderson Bros., Ltd., Victoria, B.C.	1 " ..	25	Merrimac Chem. Co., Boston, Mass.
" 20	" ..	41633	D. E. Campbell, Victoria, B.C.	1 " ..	50	Henderson Bros., Ltd., Victoria, B.C.

\* Is not arsenate of lead.



SESSIONAL PAPER No. 14

## ARSENATE OF LEAD (INSECTICIDE).

Inspector's Report. (Is not an expres- sion of opinion).	RESULTS OF ANALYSIS.								Remarks and opinion of the Chief Analyst.	
	Moisture in Sample as Received.	Results Calculated on the dry Sample.						Percentage Weights in original Sample		
		Total Arsenic p.c. $\text{As}_2\text{O}_5$ .	Total Lead p.c. $\text{Pb.O.}$	Water Soluble Solids.	Water Soluble Arsenic p.c. $\text{As}_2\text{O}_5$ .	Water Soluble Lead p.c. $\text{Pb.O.}$	Water Soluble Impurities.	Arsenic.		Lead.
									No. of Sample.	

JAS. HOGAN, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.				
.....		*	.....	.....	.....	.....	.....	.....	.....	41182	Is arsenious acid.
.....		*	.....	.....	.....	.....	.....	.....	.....	41183	Labelled 'insect powder.'

H. J. DAGER, INSPECTOR.

Labelled 'vanco' brand arsenate of lead.	44.23	22.30	67.69	6.00	0.05	0.73	5.22	12.44	37.74	41397	
.....	0.41	22.30	72.10	3.00	0.05	0.00	2.95	22.30	72.10	41398	

T. KIDD, INSPECTOR.

.....	.....	*	.....	.....	.....	.....	.....	.....	.....	44706	Labelled 'lead acetate.'
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JNO. TALBOT, INSPECTOR.

.....	49.15	27.31	67.14	4.50	0.14	2.56	1.80	13.89	34.14	42696	
'Anchor' brand pure arsenate of lead.	47.47	29.90	64.38	1.50	0.12	0.36	1.02	15.71	33.82	42697	

D. O'SULLIVAN, INSPECTOR.

.....	0.40	26.16	66.22	12.50	0.34	9.12	3.04	26.16	66.22	41629	
Swift's arsenate of lead.	0.35	27.31	66.40	2.50	0.08	0.73	1.69	27.31	66.40	41630	
.....	0.29	22.28	71.18	1.00	0.05	0.73	0.22	22.28	71.18	41631	
Swift's arsenate of lead.	0.35	29.90	63.46	2.50	0.11	2.20	0.19	29.90	63.46	41632	
.....	0.25	27.72	66.22	2.00	0.05	0.00	1.95	27.72	66.22	41633	



